The Oxford Medicine

BY VARIOUS AUTHORS

VOLUME VII

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CHAPTER I

RECOGNITION AND MANAGEMENT OF THE BEGINNINGS OF MENTAL DISEASE

By EDWARD A. STRECKER and MANUEL M. PEARSON

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Introduction

In the practice of medicine and its specialties failure to recognize and treat the beginning of mental disease often results in serious difficulties and complications and frequently entails disaster for the patient and his family. This consideration is particularly important since the patient in the early stages of mental disease is more likely to be brought to the general practitioner than to a specialist in psychiatry. For instance failure to recognize tuberculosis in its incipiency and early manifestations may deprive the patient of treatment at the only time when it could have been effective and condemn him to an unnecessary death. On the other hand failure to realize that the patient is manifesting the beginnings of schizophrenia in a given instance may condemn him to a living death and involve the family in avoidable social and economic suffering. So also if carcinoma is permitted to pass beyond the operative stage it usually means death but if paresis is allowed to progress to the stage of hopeless brain pathology then it may mean and often does mean moral and economic degradation for the patient and his family before the boon of death is received.

In dealing with those who are mentally or nervously sick as with those who are ill in a strictly physical sense eternal diagnostic vigilance is the best safeguard against serious error. Careful and thorough diagnostic study in every case means much more in the long run than an occasional brilliant diagnosis. The successful recognition of the beginnings of mental disease entails a study of the whole patient. A casual physical and laboratory examination may mean that early paresis is mistakenly diagnosed and treated as neurasthenia until the time has passed when malarial therapy might have been effective. On the other hand unwillingness to study carefully and evaluate the personality of the individual may result in long continued treatment for a vague and conjectural organic pathology over a period of time when careful psychotherapy might have averted the disaster of a fixed and chronic psychoneurotic state.

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abrupt, but usually the potentialities of the major and minor psychoses appear early in the life history of the patient Therefore a thorough history becomes a requisite of good practice and in itself is often an insurance against error There is enormous practical value in a correct historical account, and without benefit of history the beginnings of mental disease are often left outside the focus of diagnostic attention A good history excludes what is unlikely and emphasizes the probable Whenever possible the narrative should be obtained from several relatives as well as friends and it must not be forgotten that the patient is not infrequently a trustworthy source of information A condensed guide is offered in the following pages together with a few comments concerning the importance of historical facts as indicators of the existence of the early manifestations of psychotic and neurotic disturbances and as clues to the individual nature of these disturbances

Family History — The previous or present existence and the nature of mental disease suicide mental deficiency, epilepsy, organic or functional nervous disease personality whether it be normal deviated or heavily psychopathic alcoholism drug addictions organic disease, notably syphilis and tuberculosis endocrine and metabolic disorders and stigmata of degeneration should be determined in the direct (father, mother, four grandparents siblings children of patient) and collateral (uncles, aunts cousins) ancestry

Obviously failure to secure a satisfactory family history may entail heavy diagnostic penalties For instance if the ancestral tree was blighted by epilepsy or feeblemindedness then the appearance of convulsive seizures or the inability of the child to progress in school beyond a certain level may be readily explainable If there is a history of Huntingdon s chorea then the appearance of even the earliest phenomena of this degenerative disease will scarcely escape observation The knowledge of a family history of syphilis may focus clear diagnostic light upon the otherwise often obscure early manifestations of juvenile paresis True manic depressive psychosis is a constitutional disorder with its roots in the hereditarial soil and sometimes the appearance of puzzling psychotic behavior is difficult to explain without the evidence of similar liability in previous generations Occasionally the appearance of puzzling psychotic symptoms is explainable on the basis of familial endocrinopathic deviation

Personal History — Birth and Development — Here is included the antenatal situation nature incidents and complications of labor diseases

of infancy and childhood with their complications, injuries spasms convulsions tantrums, somnambulism, night terrors fears frights age of talking walking and teething general physical and early dispositional characteristics

Intellectual and Social Development — Intellectual capability, school history (talents and difficulties) attitude at home and with playmates athletic prowess and more particularly the development of the competitive spirit delinquencies social trends or sense of inferiority

It will be readily understood that without reference to such facts and others as may be elicited in these divisions of the personal history the first manifestations of mental illness may be very difficult to interpret For instance a serious dispositional change or even defect may be due to a previous sustained head injury, birth injury may condition later developing feeblemindedness or epilepsy, neurotic traits in childhood frequently are forerunners of severe neuroses in adult life in the life histories of schizophrenics the withdrawal from reality usually has been foreshadowed by the frequency of introverted traits during childhood

Sex — The history of physiological sex development and functioning should be traced from puberty to climacteric and beyond and in addition the interests and activities in the psycho-sexual sphere such as lack of the normal childhood curiosity concerning sex excessive masturbation fixation of the sex life at levels below the hetero-sexual plane love affairs abnormal attachments in childhood or adult life sexual irregularities and perversions etc should be quantitatively and qualitatively investigated

Since normal and complete sex life is so difficult of attainment by the potential schizophrenic and since the satisfactory physical and psychic adjustment seems to motivate many neurotic breaks it is not strange that quite often the initial symptomatic display in both dementia præcox and in the various psychoneuroses should have a sexual import Gross sex indecencies may mark the crossing from normality into paresis senile or arteriosclerotic psychoses the alcoholic psychoses early in their course may markedly lessen sex inhibition the manic phase of manic depressive psychoses may in its beginnings condition marked sex irregularities, sexual cruelties and crimes may be an equivalent for the convulsive seizures of epilepsy

Diseases and Injuries — What has been the general type and nature of the physical development? Endocrinopathies? Disturbances of the

vegetative nervous system Tuberculosis Syphilis? Focal and other infections? Surgical operations Obtain a particularized account of each instance

Without the diagnostic security that comes from such historical information it can be readily appreciated that early psychotic symptoms may be overlooked or misinterpreted For instance, the history of advanced arterial disease may throw light on the prodromal mental symptoms of the senile and arteriosclerotic psychoses, a history of syphilis increases the likelihood of obscure mental symptoms being paretic in nature and in practically every instance diagnostic labor is lightened if the historical perspective concerning previous diseases is clear and complete

Occupation — Nature efficiency earnings attitude toward work, changes of position Full information concerning these points may clear up doubtful issues in the evaluation of early symptoms In senile and arteriosclerotic conditions and in paresis there is soon a decided diminution of productivity, in paresis too there may be a sharp clash with superiors or associates, the work history of the alcoholic is "patchy and inefficient, the manic depressive, the schizophrenic and the paranoid soon develop frictions in the occupational environment the constitutional psychopathic changes positions frequently and, usually without sufficient reason

Alcohol and Drugs — Amount and kind of beverages consumed? Periodic or steady drinker? Effect? Drug addictions? Occupational poisons?

The mental symptoms due to alcohol the narcotic and other drugs lead and other metals and chemicals including gases used in the industries may appear abruptly and in their complexion there may be no clue as to their nature A careful history will save mistakes identify the etiological agent and insure prompt treatment

Previous Attacks of Mental Diseases — Dates? Where treated? Apparent cause? Duration? Diagnosis? Result?

Since certain of the psychoses, notably manic depressive are strikingly recurrent and since too in manic depressive from time to time various indefinite substitutions may appear in place of a frank manic or depressed episode, this section of the history becomes exceedingly important

Etiological Factors, Precipitating Causes and Onset — A careful inquiry into these factors is imperative Often it may be determined not

only whether the initial symptoms are actually psychotic or not but also there may be gained valid ideas as to their nature

Personality —It is difficult to see how there can be any accurate evaluation of the first presenting mental symptoms without some estimate of the personality of the patient The margin of error is just as wide as when in general medicine an opinion is formed without reference to the functioning of the body as a whole

Personality has eluded satisfactory definition In one sense it is a condensed record of the individual's life long reactions to his environment and it is the crystallization of this constant interplay and contact Methods of approach to the study of personality cannot be elaborated in this study To gain an adequate idea of its nature and significance in a given patient we must consider the general intelligence knowledge and judgment output of energy general attitude toward environment inner mental life attitude toward reality and plan of meeting it mood emotional reactions sexual instincts feelings of inferiority and finally a summary of personality traits An understanding and evaluation of personality is enormously important in the interpretation of the beginnings of a psychosis

Personality in its widest sense takes into account constitutional factors such as bodily structure and temperament which like many psychological traits are largely inherited Psychological physiological chemical and anatomical endowments constitute the individual's capital in life Conditioned by some common guiding influence (hormonic?) they act and react upon one another harmoniously or otherwise Types of bodily structure have been associated in literature and in lay and medical opinion with corresponding types of character and temperament These conceptions too long neglected by modern scientific medicine recently have been revived Two well defined physical types are easily distinguished the heavy broad thick set pyknic (pycnotic) type and the light relatively tall slender leptic (leptotic) type Nearly synonymous designations are hypersthenic and asthenic herbivorous and carnivorous etc These types of habitus differ not only in relative measurements of head trunk and limb and in bony structure but also in size form and relation of external organs, etc Well developed types of habitus more or less evident to inspection are definitely differentiated by anthropological measurements and derived indices According to tradition (to a large extent confirmed by recent observations) individuals of well marked pyknic habitus are commonly friendly sociable

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blood chemistry sugar tolerance blood sugar and basal metabolism In our records there are examples of a wide variety of mental symptoms appearing in previously normal individuals including catalepsy negativism stupor mutism distractibility retardation depression suicidal attempts emotional instability hallucinosis suspiciousness delusions confusion and disorientation which by the criteria of laboratory examination could be promptly diagnosed as psychotic phenomena due to paresis bromide intoxication carbon monoxide poisoning lead toxicity pellagra puerperal psychosis pneumonia uremia osteomyelitis or pernicious anemia In the absence of any specific physical neurological or laboratory data there is justifiably a leading suspicion that the mental symptoms are referable to schizophrenia manic depressive one of the paranoid states or are psychoneurotic in character

Finally it must be remembered that mental disease is not to be too lightly diagnosed Mental symptoms have their prototypes in behavior that is considered within normal limits and not only the nature but also the persistency of the presenting symptoms must be carefully considered For instance there are distractibilities and retardations of thought normal speeding up or slowing which are readily explainable on the basis of *mood changes or fatigue* There are blue spells and exhilarations which may be easily referred to environmental happenings Hallucinations may be normal happenings and become abnormal only if the individual is persistently unable to accept the valid explanation of the sensory deceptions In the presence of strong prejudice and emotional reaction false opinions may approximate delusions and still be within the bounds of *normality* There are normal lapses of memory which appear under conditions of fatigue or with advancing age that in themselves do not spell senile dementia Finally there are mild psychoneurotic manifestations that are so widespread and almost universal that they cannot be considered too seriously In one sense the test of a psychoneurotic difficulty is to what degree it interferes with the efficiency and life satisfaction *of the individual* Thus a *fear of high places* or of riding in an aeroplane need not demand any particular therapeutic attention

General Treatment Hints — With *the presentation of the early* symptomatology in each major and minor psychosis there will be given a plan of treatment In the meantime a few general therapeutic hints will *not* be amiss The tendency usually *is to overtreat* If as is often the case the initial symptoms disturb the environment as for instance

(extroverted) personalities with labile emotional reactions those of the asthenic habitus on the contrary, are usually reserved, self-centered (introverted) individuals with deficient emotional response

These brief descriptions are pertinent to the recognition and treatment of the beginnings of mental disease In many instances the initial symptomatic displays in the two most common psychoses, schizophreni and manic-depressive are strikingly similar The consideration is quit important since the management of the two psychoses is markedl different A thorough evaluation of the pre psychotic personali furnishes a measure of diagnostic protection

Physical Examination — A thorough estimate of the physical tion should always be made before any evaluation of the mental is attempted An error which sometimes has serious consequence assumption that the physical findings are relatively unimportant nd therefore only a casual examination is needed In the survey early mental symptoms there is required a complete physical neur cal and laboratory study In the light of the findings it is frequent possible to arrive at an exact understanding of the symptoms while without such findings gross misinterpretations are very likely

The physical examination may discover in the one instance an arterio sclerotic process which makes clear the appearance of gross memory failure or a retention defect or a sudden ethical deterioration On the other hand it may reveal a hitherto unrecognized toxicity and thereby unravel the enigma of mild confusion and disorientation Syphilis may be uncovered and thus make clear that the unexplained psychotic behavior is due to paresis or some other variety of cerebral syphilis

The neurological examination may reveal again that the acute mani festations of dangerous violence are obviously due to paresis that dull ness irritability and confusion with hallucinosis are being motivated by brain tumor or that we are witnessing psychotic symptoms associated with paralysis agitans tabes dorsalis posterolateral sclerosis etc

Laboratory examination may throw clear diagnostic light upon the often obscure mental symptoms that may mark the transition from normality In every instance there should be an examination of the urine and of the blood (hemoglobin per cent red and white cell counts differential counts and Wassermann reaction or other serological tests for syphilis) Frequently it is necessary to add one or several and occa sionally even all of the following examinations spinal fluid feces kid ney function x ray particularly of the teeth and gastrointestinal tract,

home or outside of it the first few days of the physician's contact with the patient are of the utmost importance It is a critical time not only from the standpoints of correct diagnosis and the prompt institution of proper treatment but also to safeguard the patient from danger to himself and from the environment to protect others from the patient and to prevent too much social and economic disorganization of the family It is not to much to say that it is frequently during the first week of mental illness that the patient is either set upon the road to adjustment or undone while the family is quickly returned to its former state of economic and social constructiveness or remains chaotic and the result is largely in the hands of the attending physician

The Psychoneuroses

Introduction

Perhaps it is fortunate that the damage produced by the psychoneuroses the personal the social and economic damage cannot be accurately measured It would have to be reckoned at a staggering total A large proportion of the cost of both World Wars which is still being paid in money and social disorganization is due to the many cases of psychoneurosis There is good reason to believe that next to upper respiratory illnesses the most crippling illness in schools colleges business organizations etc is psychoneurosis For further discussion of the psychoneuroses see Vol VII Chapt X

There are many reasons why this should be true Factors which favor the occurrence of the psychoneuroses are very prominent in our present plan of civilization From a broad philosophical perspective a psychoneurosis is a protest of the individual against being engulfed into the mass This is all the more pertinent since civilization especially in great urban centers is highly standardized not only in the daily occupation and routine of the masses but in the manner of living houses clothes food diversions etc Thus the individual unit unconsciously feels belittled and inferior Sometimes this inferiority is consciously expressed In a married woman of 45 one of our patients the anxiety symptoms were greatly increased when she and her husband lived in a huge city apartment house during the winter months At other seasons of the year when she lived in the country she was far less neurotic Attempts to compensate for inferiority feelings probably are prolific

when the patient is noisy, the relatives usually feel there is a panacea in sleep and demand that the patient be given large amounts of sedative and hypnotic drugs A considerable percentage of patients admitted to mental hospitals and sanitoria have had drug toxemia added to the psychosis The physician should resist the temptation to produce drug restraint Even if the psychosis is in itself not toxic it is still worthwhile to employ thorough elimination and particularly is this true since in the family disruption, occasioned by the alarm of mental disease one may be sure that no one has supervised for the patient such matters as kidney or bowel functions There seems to be an impression that suicide is apt to occur only in melancholia Contrariwise there is in schizophrenia in the senile psychoses, in the delirium and in practically every psychosis real danger of suicide, and one of the first duties of the doctor is to institute safeguards against self destruction Homicide too, must be constantly borne in mind The delusions of many patients center on their relatives, and a homicidal eruption may be lighted by the 'tactful' efforts of relatives to convince the patient that his ideas are unjust and unreasonable

The home is so disorganized by the presence of mental illness that everything goes by the board and unless the physician has it in mind the children in the family will be neglected and exposed to the great psychological damage of being permitted to witness exhibitions of mental symptoms which they cannot understand and which fill them with terror With actual mental disease in the overwhelming majority of instances the decision to advise admission of the patient to a sanitorium or mental hospital must not be too long delayed There is however, a group of psychotic patients and many psychoneurotic patients who can be treated successfully in the home Much depends on the amount of noninterference the physician is able to secure from relatives and friends They fall into two large groups in respect to the 'help' they wish to give to both psychotic and neurotic patients The first group is over-sympathetic and practically maudlin in their attitude the second believes in combating the depression or delusions or other mental symptoms by argument and various positive measures or for instance, attempting to overcome obsessional fears and other psychoneurotic symptoms by forcing the issue Unless a fair degree of cooperation can be obtained then even the mildest instance of mental or nervous illness must be treated outside the home

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has occurred in two psychoneuroses In World War I the common neurosis was relatively simple, somewhat naive conversion hysteria In this neurosis the not-conscious emotional conflict between the self-preservative instinct and the protective behavior which it activates and inculcated soldierly ideals and the behavior they demand was pathologically and expeditiously converted into incapacitating functional symptoms such as paralyses aphonia deafness blindness etc In World War II the preponderant psychoneuroses are anxiety reactions Their clinical manifestations would seem to indicate that such deeper human emotional recesses have been penetrated For instance in so called combat fatigue catastrophic nightmares may occur in which terrifying battle experiences are relived with startling intensity and displays of naked fears Or there may be startle reactions in which sudden accidental sounds subconsciously reminiscent of battle sounds call forth exhibitions of severe generalized trembling Guilt feelings in which survivors are tortured by thoughts that either through omission or commission they have participated in the death of fellow soldiers, perhaps friends are quite common It seems unlikely that in a few decades the ethical stratum of man's superego should have progressed so rapidly More likely it is that the calamitous and horrifying situations produced by modern war machines penetrate deeper and more acutely sensitive emotional levels

It seems likely too that such desperate war situations frequently strip the veneer from the core of human emotions whereas heretofore such exposures were relatively infrequent Furthermore behavior reactions to these situations in which the emotional impact is brutal and often long continued would seem to indicate that fear has been dissected into several layers At least there are a number of somewhat distinctive behavior responses varying from mild manifestations like restlessness and over precision in the performance of purposeful motor movements to complete stupor It is possible that we have come perilously close to the saturation point of human emotions, and that while there may be no limit to the resources of engineering genius in perfecting machines of war there is a limit to the capacity of human emotions to survive the psychic devastation and degradation which are produced

It must be emphasized that many and indeed the majority of neuropsychiatric disabilities do not appear as a result of combat experiences but are detected by the hundreds of thousands at induction or in training areas in the continental limits The bulk of these conditions are

sources of psychoneurotic trends The Jews often have a feeling of racial inferiority Again civilization is complex, intricate and very material It is so arranged that the normal satisfaction of the natural instincts the deep sources of energy must often be deferred inadequately realized and sometimes altogether abandoned Since they must come to some kind of expression it is not surprising to find various pathological and neurotic subterfuges Here are a few of the reasons why the psychoneuroses flourish in the soil of a somewhat artificial civilization

During the first World War one of us served as psychiatrist to a combat division Indelibly impressed by repeated experiences were these two facts First that the shorter the elapsed time between the development of the symptoms and the institution of treatment the better the chances of adjustment second a very large number of those patients who were not treated promptly became chronic and hopeless Exactly the same situation obtains in civil life Soon the experience that was dynamic in the production of the neurosis becomes repressed and encrusted with later happenings and is only faintly visible if at all The chief therapeutic hope lies in the facing of the real and concrete implications of the nature of the original conflict Therefore the recognition and treatment of the beginnings of the psychoneuroses attain paramount importance

At this point it may be permissible to diverge long enough to briefly state some of the lessons which should have been learned from the two World Wars One of us was a Divisional Psychiatrist in World War I and both of us served in psychiatry in World War II one actively in the Navy and the other in a civilian capacity as Consultant to the Secretary of War (in Psychiatry) for the Surgeon General of the Army and the Army Air Forces and Consultant to the Surgeon General of the Navy It would seem that the lessons to be learned from the two World Wars are very much the same and the enormous increase in the neuropsychiatric casualties of World War II as compared to World War I would indicate that we failed to learn the lesson which we should have learned in World War I World War II was a war of giant aerial fortresses dropping massive bombs with deadly precision, of huge battle ships and submarines of deadly artillery and crushing tanks, of rocket planes and rocket torpedoes of flame throwers capable of directing searing liquid fire around corners Perhaps in the amazing increase of machines of war in engineering precision and death dealing power there is to be found part of the reason for the displacement in frequency which

In the main the chief reliance is on familiar and simple therapy rest plenty of good and hot food removal of symptoms by suggestions reassurance and desensitization of the ego from the insult of not having been able to continue in action the development of insight by explanation of the nature of the underlying conflict and the mechanisms involved in the production of the symptoms

Will the vast experience of neuropsychiatry in this global war be intelligently applied in the military framework Having failed in our preparation twice within 25 years and having paid a heavy penalty for our failures it is inconceivable that we should again be remiss in filling the lamps of military psychiatry with the oil of organization and personnel No matter how small the peacetime army may be there must be maintained in the Office of the Surgeon General at least a skeleton of neuropsychiatric organization capable of rapid expansion and in close touch with qualified psychiatric medical personnel available for service should the need arise Even such a modest provision would be in jeopardy unless the Surgeon General is made a member of the General Staff It is incomprehensible that the Surgeon General who presides over the medical health and care of more than 8,000,000 men should be under the line which if it chooses may override his judgment in medical matters

Many generations to come will have to pay for the huge neuropsychiatric morbidity rate of this war if not in blood certainly in tears and sweat Surely prevention will have important consideration in the military psychiatry of the future

Neuropsychiatric induction has not been successful Even the small amount of screening it accomplished is remarkable in view of the dearth of psychiatrists and the pressure of time permitting at best five minutes to discover disabilities which rarely have external markings as do physical handicaps like hernia or heart disease We would have been better prepared if there had been on record a survey of the national health and if the war service act had been less selective and had mobilized every citizen from 18 to 70 each one taking his or her proper place in the total war effort

If prevention is to be effective it must deal with morale An army may march to its objective on its belly but it takes the objective by its morale Morale is much more than the sum of a man's chemistry or organs or mental functions Perhaps it is faith and courage devotion to the nation desire to live for it and should the need arise die for it

somewhat vaguely psychoneurotic with rather indefinite psychosomatic symptoms or personality disorders often indicative of grave psychopathic traits, sometimes suspiciously akin to malingering. It is to be emphasized too they are merely sharply focused in the regimented and disciplinary setting of military life. Usually they existed prior to service, and the trail of inadequacy, selfish behavior, instability and lack of social responsiveness is plainly discernible. What is the significance of this serious situation? Some thoughtful observers believe it is indicative of softening, a deterioration of our youth. This is a broad assertion which should not be accepted without sufficient validation. In any event here is a problem which needs thorough discussion and clarification. It is not too much to say that unsolved it will threaten the security of our democratic civilization.

In regard to treatment modern warfare has not devised totally new neuropsychiatric treatment formulae but there have been skillful and useful adaptations of known treatments. Narcosis therapy usually given for a week or ten days or more has been shortened to one to three days, sometimes being followed by two weeks of subshock doses of insulin resulting in an average weight gain of about twelve pounds. Grinker advocates narcosynthesis by the use of sodium pentothal intravenously and the soldier, in a twilight zone of consciousness through suggestion is made to relive his battle experiences. Perhaps the most important development in psychological treatment has been the application of group psychotherapy. It treats patients in groups and undoubtedly the exchange of experiences and opinions between patients shortens the time required to bring patients face to face with the underlying motivations of their reactions. Furthermore the group is familiarized with the operations of the usual mechanisms unconsciously employed as technics to produce the psychoneurotic escape. Fortunately the improvement of group therapy has not been hampered by crystallizations of theory or practice. Many innovations are being tried. Particularly important is the determination of the relatively greater integrity or not of recoveries on the basis of intellectual understanding and insight as contrasted to those in which there was an emotional "breaking out" in the shape of emotional expression and portrayal of the harrowing combat experiences.

At the front the combination of rest, good food, simple psychotherapy and brief narcosis by the administration of sodium amytal is the therapeutic choice.

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If prevention is to be effective, it must deal with morale. An army may march to its objective on its belly, but it takes the objective by its morale. Morale is much more than the sum of a man's chemistry or organs or mental functions. Perhaps it is faith and courage, devotion to the nation, desire to live for it and, should the need arise, die for it.

Morale does not arise spontaneously. It must be produced, honestly but deliberately. Good morale has its foundations in simple things, appetizing, well cooked food, satisfactory living conditions, neat well-fitting uniforms and shoes, interesting diversions and sports. Medical care should be of such quality that the soldiers have complete confidence in the medical officers not only for a current illness but for the sickness or emergency of the future in encampment or battle.

Proper relationship with officers, commissioned and noncommissed, is morale making. It should be of such a character that the soldier will not hesitate to talk over military and home problems and will find wise counsel. Mass exercise and drills have morale making value, and from them are derived the security and confidence that come from the strength and bond of numbers.

Conditioning men for campaign and battle must envisage something more than mere familiarizing with troop movements and hardening to the noises and sights of war. Equally important is psychological self understanding. No soldier should be permitted to enter battle with the belief that in some magic way he will suddenly be unafraid. Certainly he will experience fear, the natural protest of his strongest instinct and his most ancient biological function, self preservation. Neither should he be taught that fear can be suppressed. It can no more be suppressed than can the beat of the heart be stilled. The soldier should be taught how to mobilize his resources so that he may learn to control his behavior when he is afraid. If this lesson is taught correctly and learned thoroughly, then fear becomes an effective fighting ally, motivating behavior that not only produces satisfactory military action but also gives the soldier the best chance of escaping with his life.

Many of these considerations are even more significant for the general practitioner of medicine and for specialists in all the non psychiatric fields than they are for the psychiatrist.

In the first place the potential, incipient and early psychoneurotic comes not to the psychiatrist but to the family physician, the internist, the surgeon, the gastroenterologist, the genitourinary specialist and other practitioners. After reasonable and thorough study fails to reveal somatic disease, there is all too often a departure into the highly theoretical and conjectural therapeutic channels of the endless treatment of very minor defects. If the cause of the symptoms is an unsolved emotional problem, nothing but a deeper, firmer rooting of symptoms can result from such measures as operations for fractional deviations of the

nasal septum, cumbersome apparatus or even surgical operations for slight degrees of ptosis of the stomach endless refractions for somewhat hypothetical imbalances of the ocular muscles gastric lavage and gall bladder drainage for conditions of the stomach or gall bladder that cannot be substantiated by the usual tests highly artificialized diets and other things

In the second place there are all too frequently admixtures of organic and functional symptoms For each patient whose symptomatology is readily understandable to the clinician there are at least five in whom the symptoms are not at all clear-cut Sometimes the symptoms that are confusing run hand in hand with those that are readily explainable on the basis of organic disease, often after the resolution of organic disease certain symptoms that are difficult to explain persistently remain This is rather a large segment of the practice of medicine In the wake of any illness after surgical operation even a minor one like tonsillectomy or the extraction of a tooth after normal childbirth after trauma and in the diseases of childhood symptoms frequently arise that cannot be referred to the original disturbance except by a display of mental gymnastics on the part of the clinician that is more interesting than scientifically valid The reason is obvious. In the majority of cases these symptoms are not organic but functional that is they are not somatically but emotionally determined The frequency of such situations is not at all surprising The psyche of every human being is to some extent at least a battleground of conflicting trends desires and emotions The majority of us nevertheless, carry on satisfactorily enough by a series of more or less adequate compromises Let there occur however a flaw in the armor presented to the environment perhaps by reason of a physical incapacity then there are at hand both the opportunity and the psychological temptation to ease the conflict by employing the mechanism that converts emotional problems into physical symptoms The clinical therapeutic moral is obvious

Early Potentialities and Manifestations of the Psychoneuroses

In order to find the beginnings of the psychoneuroses it is necessary to reach back into childhood History after history reveals clearly the fact that very often the neurosis did not as is related begin a month or six months or a year before the adult patient saw the physician but goes back two three or more decades to the early years of life Selected from

our records at random, we find that a man, now 49 years old and a complete neurasthenic with a fixation of his entire attention on the genitourinary zone, was in his childhood afraid when he was away from his aggressive, dominant mother, a woman with a train of gastrointestinal symptoms obviously representing sex revulsion to her husband was in childhood so shielded from all sex knowledge that she was always frightened when she accidentally heard it discussed, an extremely neurasthenic young man developed neurasthenia in the face of a proposed marriage In his childhood he had been frightened at his father's sternly religious attitude, when he had sought his aid concerning masturbation He continued to masturbate but soon began to experience neurasthenic sensations in the perineum and scrotum

A woman, 45 years old with conversion hysteria was admitted with the complaint by her husband that she claims that she can't walk This illness had started ( ) nineteen months before when after a quarrel she squalled and kicked and said she was going to die She said she couldn t eat and her bowels got so they didn t move She vomited and couldn t keep any food on her stomach When it started she weighed 160 pounds and in two months she got down to 115" One day her husband came home from work and found her in bed She told him she had fallen and bumped her head and that she had been unconscious She had remained in bed ever since refusing even to get up to go to the toilet Until the time of her admission to the hospital twenty months later, she complained of a great variety of physical ailments and had many doctors see her The development of this illness began in early childhood The patient was the youngest of four girls and was babied by the mother and an older sister She had her own way throughout her early life and was absolved from housework dishwashing etc She had had 'stomach trouble", had been preoccupied with constipation since childhood and there had been a few night terrors especially one dream about a dog getting on her bed She had been afraid of the dark of death of being ill She had been fairly outgoing and had many girl friends but had been somewhat prudish about going with boys Catamenia began at 13 There had been no sex instruction and she had worried over the flow of blood until an older sister explained it crudely Dysmenorrhea was always so severe that she had to go to bed for a day or two during each period She married at the age of 19 She was totally ignorant of sex at that time, and as a result of the first night of married life, told her husband the next day that she was sorry she had married him

A female stenographer 37 years old had a severe neurasthenia marked by extreme fatigue, severe headaches, many digestive disturbances, tensions, etc. At the age of 11 she had had nasal catarrh and stomach and intestinal trouble, which was variously diagnosed and treated and regarded by one physician as tubercular. Even in her childhood she ate only small amounts of food, fearing subsequent discomfort. Furthermore there had always been insomnia and, all in all, she never felt well. The family were over solicitous concerning the child's health.

A man 49 years old was obsessed by the number 13 to such an extent that his daily activities were seriously hampered. He stayed in bed on the thirteenth day of the month and on the twenty seventh (thirteen letters). He always hopped over the thirteenth step of a stairway. He had to count the letters in short phrases, words in sentences, his steps, number of streets passed, etc. As a boy he had been seduced by a servant girl who was very superstitious about the number thirteen. After this he had gone to a boarding school, where he had come under strong religious influences, and where he had suppressed the boyhood sexual experience.

A young man 30 years old and happily married suddenly began to experience a series of fears. In a trolley car or elevator a wave of apprehension would sweep over him accompanied by throbbing of the vessels of the neck, tachycardia, a heavy feeling in the chest, a lumpy sensation in the throat and a bursting in the head. These sensations recurred frequently. Even though he could not be persuaded to leave his apartment for a turn about the block, yet he insisted on having his motor car parked in front of the house. The only explanation he could give at this time was that he felt it necessary to have a means of escape available. He had many phobias and conversation about death was unendurable and made him suffer physically and mentally. He spoke frequently of being surprised, of being caught unprepared. His fears made him a recluse and he shunned all society except his wife and father in law. Even when his wife could do nothing, his father in law could calm him. During his childhood the atmosphere of this patient's home was sternly religious. Eternal hell was held out as a punishment for bad behavior. There were four brothers, all strong and robust, while the patient himself was puny, the weakling of the family. He recalled that he was the butt of his brothers' jokes and frequent ridicule. His father was his champion in the home and on numerous occasions rescued him from the hands of his brothers. As a child he would picture in his mind the dread

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I was on a train. I was reading a murder mystery and suddenly I felt faint and dizzy. I was alone in the coach except for some laborers whom I felt could not assist me. I was in a panic. I thought I must be dying. I was afraid to call the conductor for fear he might not know what to do and frighten me more. Soon after this I developed fears of crowds and closed spaces, of loud noises and of being alone. . . . Again on a train I felt suddenly I could not go through a tunnel farther along the line. Why I didn't know. I felt dizzy, faint, choking, my clothes felt tight as though they would smother me. I could not get my breath. Again there came the idea of dying. I had to leave the train. . . . In looking back to my childhood to try to see where my fears developed there were many incidents and situations worthy of note. My parents were highly emotional people who lived at a high tension. Both drank considerably and quarreled violently, often threatening each other's lives and physically attacking each other. This usually happened at night when I was in bed and thought to be asleep. I remember often lying awake afraid to fall asleep for fear something would happen. I also remember once my mother screaming for help, saying that my father was killing her. I ran in the room crying and terrified and unable to do anything. Somehow they realized my fear and stopped to comfort me, telling me that they were only fooling. This made me more insecure, for I knew the truth. Another time I woke from a nightmare frightened and ran into mother's room for comfort only to find her unconscious from liquor. I could not waken her and thought she was dead. I went wild with fear and slapped and pulled her until she opened her eyes. My relief was overwhelming but she only groaned and slept again. I lay all night beside her comforting myself with the thought that I had wakened her and could again if necessary, but afraid to try in case I would not be successful a second time and in that case I realized I would be utterly helpless. During another family quarrel my father threatened to commit suicide. Mother to my horror dared him to go ahead. He left the house. I begged her to stop him but she only laughed and said he was a coward and would not dare to do anything to hurt himself. Before he left she made me say that I hated him so that he could hear me. After he was gone I was in an agony of fear that he believed what I said and if he killed himself I could never unsay it."

So might examples be endlessly multiplied but perhaps the premise that the beginnings of the psychoneuroses of adults are to be found in childhood has been demonstrated. They should be recognized then and

ful possibility of being placed in situations from which he could not escape and from which his father could not rescue him. There was a close bond between father and child. The father was sternly religious, and though the boy dreaded them, yet his parent's concrete expositions about the future life and punishment fascinated and deeply impressed him. The saddest memory which he had, about which he had never spoken to anyone heretofore and the telling of which released a flood of tears, was the death of his father. He could describe the scene minutely, the dying man's last words, the whole sad pharaphernalia of death. "The feeling of being alone was terrible." He suffered acutely "both physically and mentally." From that day to this he had tried to avoid all thought and association of death. Another memory, which he recalled with great difficulty, was one which had produced a marked fear reaction. He was about eighteen years old and working for his brother. A boyhood "scrape" had induced the need for money, and he was several times guilty of abstracting cash from the register. This was discovered by the brother who treated it very dramatically. For one thing he had insisted on a written confession. Furthermore he demanded that the boy go through a theatrically planned religious ceremony. "Always", and "even now", the patient confessed, he feared that somehow and somewhere he would be placed in some situation when his brother would accuse him of the "crime", "and there would be no escape." There was one other important childhood experience, repeated a number of times at about the age of eight. Two maids who were employed in the household would from time to time take the boy to the kitchen and let him examine their legs and genitalia. When this experience was brought back to consciousness, emphasis was placed by the patient on the fact that while he had been fascinated, the stronger emotion was fear that some member of the household might enter the room and discover him before he could escape.

A very intelligent young woman, now thirty one years old, had her first anxiety attack at nineteen. In other words, "One night after I was in bed, just before dropping off to sleep, I suddenly became obsessed with the idea of death, its finality, and my utter helplessness in the face of it. As I remember, thoughts such as these kept running through my head: 'Every minute is one nearer death.' ... 'Suppose death means being shut off alone and helpless and never seeing anyone again.' Soon I was in a panic." Two other experiences are typical of the anxiety crises through which this patient frequently passed. ... Later in the morning

ditioning it that it will sufficiently supply those things that may be reasonably expected to bring the psychological potentials into full flowering

What are some of the factors that when finally added together go to make up a normal personality? The problem has been more or less solved in the physical field We know of the importance of fresh air sunshine cleanliness the proper kind of food exercise and so forth and experience gives us the assurance that these ingredients will build up into a sound and smoothly functioning physical machine Unfortunately we know far less about psychological needs

Probably the most elemental qualities that go into the personality come from physical *motion* In its early life we may think of the child as a something that is almost wholly responsive to sensation It answers by motor behavior the stimuli that come through the route of the five ordinary senses and the sensory pathways of several others the stimulus of hunger the stimulus of temperature differences the stimulus of pain the stimuli from the various organs of the body demanding satisfaction The infant explores its environment not of course consciously but as it were instinctively With hands and feet and indeed with entire skin surface it comes into contact with objects in the immediate surroundings and it notes again not consciously similarities and differences in shape size consistency texture and the like From the very beginning it stores up an enormous number of sensori motor experiences How important is all this is readily demonstrated by the rapidity of habit formation and elaboration For instance note the speed with which the child progresses from the crawling stage to upright coordinated walking

No one really knows the psychological importance of motion It is probable that a bound child that is, a child physically prevented from exploring the environment and therefore with the number of incoming sensations cut down to a minimum would be seriously retarded mentally Psychologically speaking a quiet child is not a good child not a sound child In effect a quiet child is one who is being denied the opportunity to get its first growth of mind Children must have a free and unrestricted chance to come into contact with the environment If there were consciousness freedom of motion is probably one of the first things the child would demand Probably it would say 'Give me the chance to move for it conveys this need almost as clearly as it does the food need

The second and probably the most dynamic psychological factor

this understanding plus early therapy would successfully abort many psychoneuroses

The doctrine of the physical optimum for the child needs no argument Proper food fresh air sunshine rest, exercise, in themselves when rightly utilized are invaluable in the prevention and early treatment of the psychoneuroses The difficulty is that these physical safeguards and therapies relatively at least are usually at hand, but the psychological needs are much too frequently unrecognized and neglected

The problem of the early recognition and childhood management of the psychoneuroses after all resolves itself into the question as to whether or not the environment affords suitable opportunity for the satisfactory development of personality The beginnings of the psychoneuroses are to be looked for in those deviations of childhood personality, which are inevitable when the environment fails to supply the growing psyche with suitable material in sufficient quantities and their management involves promptly a certain degree of environmental rearrangement so that the personality that is beginning to deviate psychoneurotically will be led back to a psychological fairway These considerations require further discussion

There is in every living organism a potential or an innate possibility for growth and development In utero the buds of organs, nourished by the same blood, grow into highly differentiated organs, liver, lungs, spleen and so forth It would seem as if there existed in the organ buds a potential for the selection of the factors that will insure normal growth After birth the child is still quite incomplete with small organs, muscles, bones and appendages Again the doctrine of the potential operates and from the nutrition that is delivered to the various parts of this small but complex structure there is seemingly selected what is needed to bring about a highly differentiated maturity of organs

An interesting psychological parallel may be drawn If there is innate the potential for physical maturity likewise is there the potential for emotional or psychic adulthood It should be repeated and emphasized that the chief purpose of the mental development of the child is to give him the opportunity to make for himself a workable personality, so that the conditions of adult life may be satisfactorily met, so that he may meet his fellow men on even terms give and take and find satisfaction and happiness in life Thus the problem becomes one of discovering the nature of the psychological potentials and then, since the shaping of the environment is largely in the hands of adults of so con-

upon them They continue to postpone the day of emancipation Finally it is too late The parents have succeeded in selfishly perpetuating them selves in their children The dependence once begun never comes to an end The handwriting is on the wall nurses governesses teachers and innumerable others form an endless procession of surrogates for the parents They are slavishly imitated and worshiped

The moral concerning imitation may be reduced to a simple physical parallel If we wish to start the personalities of children in the right direction if we wish to prepare them for what is the most important issue in life namely psychological maturity then we must give them the things to imitate that will contribute toward that end This is a *direct charge to any one who has any part in the making of the en vironment for children* It should be filled with qualities to imitate that may be counted on to build sound personality honesty, straightforward ness, truthfulness courage reflection judgment decision and freedom from the opposites of these attributes A bit of introspection should enable us to pick out those things in ourselves that spring from imitation and that have seriously hampered us It might be well to do all we can to prevent children from being similarly burdened

The third important channel through which some part of the en vironment flows into the mold of personality is *suggestibility* It might be defined as an impetus or inclination toward certain kinds of behavior the impetus being given by something in the surroundings Suggestibility is much more subtle than imitation Imitation is direct A child sees something done by an adult and allowing for certain differences be tween adult and child it faithfully reproduces what it has seen Sug gestibility is much more indirect The child gets from its environment a certain inclination or hint and its behavior tends to follow the suggestion All human beings are suggestible Savages and children are notably sug gestible It is not an overstatement to say that all normal children literally drink in suggestion from the environment from hundreds of sources and much of this suggestion in some shape or fashion becomes a part of their personalities The mother for instance who when her little daughter stumbles and accidentally breaks a teacup says to a visitor Poor Betty she is so nervous just like her father is directly suggest ing nervousness and if the child continues to be subjected to such harm ful suggestion one may predict the inevitable result a nervous child The boy who when questioned about his future occupation replied

is *imitation* One need not define imitation nor argue its extreme importance in building mind and personality Obviously imitation adds many layers to the personality structure Naturally children cannot discriminate as to what to imitate Good and bad alike that which builds personality and that which destroys it are both ingested as readily as is food

In considering imitation we are rather close to the psychological process of *identification* Without going into its psychological significance too deeply, we may regard it as the emotional driving force that is back of the early imitation of children It is the dynamic force that makes it imperative for children to imitate first their parents and later, those with whom they come into intimate contact It is particularly noteworthy in its most common and potent form *idealization* It is borrowed strength just as identification and idealization in adult life are borrowed strength It is the psychological mechanism we use to supplement our weaknesses, to put a glamour on our mediocre lives In children its utilization is very direct Some of us may remember the firmness of our childhood belief in the opinions of our parents We were willing to fight for them The only thing needed to settle any argument was the magic formula "My father said so", or My mother said so' In our tender years we all used this borrowed strength, this process of idealistic imitation It became inculcated into the personality and is one of the important things that determined its present characteristics It is not that we were actually defending the opinions of our parents There was scarcely enough intelligence to make any logical defense We were not listening to *proof* from the lips of our parents That they said so was enough Thereafter we defended emotionally the citadel of strength that they represented

This is a good time to insert a word of caution Each one who is a parent does represent a citadel for children This citadel must not be allowed to crash too quickly However it cannot be allowed to stand indefinitely in an unchanged condition for that would be flying in the face of every sensible psychological admonition that the child must be emancipated and given independence This emancipation must be brought about gradually and tactfully but it must be complete The disastrous results of failure to accomplish emancipation may be seen on every hand Many unwise parents literally hang on' to their children They make decisions for them far beyond the time when the children should be making their own They openly encourage children to lean

gestions that will add worth while traits to character formation and it should skillfully feint away the suggestion of those things that would detract from sound personality.

A fourth factor in the formation of the personality might be called *love of power*. It may be defined as a more or less unconscious wish or drive to dominate the immediate surroundings. It is a natural thing and should be readily understood by adults since it is carried into our grown up life. Do we not find satisfaction in dominating our personal surroundings even though it may be in only a limited way? Furthermore do we not tend to hang on to whatever bits of power we have obtained? Is there not in each one of us an unwillingness to relinquish a dominion once gained however small it may happen to be?

Without going into the deeper psychological reasons for the love of power it is easy to see why it should be so prominent in childhood. Within the limitations of not doing actual harm everything is done to make the baby satisfied comfortable and happy. Without conscious process of reasoning the child nevertheless senses its power over the environment. For instance there is more than an even chance that the production of a certain kind of noise called crying will stimulate the adults to relieve an unpleasant situation. This kind of situation cannot happen day after day without inducing an appreciation of dominance and a desire to retain it.

All too soon comes the bitter disillusionment. The stage of happy dominance over others must come to an end. The child must learn that adults and even other children have rights and that these rights must be respected and frequently conceded. There comes inevitably the conflict in the child between the demands of the herd and his own wish to retain or later to regain the power of his babyhood. In reality it is one of the tragedies of childhood. Sometimes it is a silent tragedy; sometimes it is manifested as most perplexing behavior. From time to time parents and even physicians are puzzled by the atrocious behavior of some child who is beginning to recover from a long illness. The explanation is simple enough but its implications are very serious. The child has had a lengthy painful and exhausting sickness. The illness comes to an end and convalescence begins. It is natural for the adults of the family to want to make up for the pain and discomfort the child has suffered. It is permitted to have its own way, perhaps too much its own way. Few normal children can withstand the temptation to reach out and attempt to grasp the golden apple of childhood power that

I guess I am going to be a neurotic like my father was faithfully reflecting the atmosphere of invalidism in which he lived

A consideration of suggestibility naturally brings up the *conditioned reflex* A psychological conditioned reflex is a behavior response to a secondary stimulus that has become associated with the initial or primary one Much of the troublesome behavior of children so called 'nervous indigestion, nervous' insomnia enuresis and so forth, is the result of badly conditioned reflexes For instance bedtime which should be normally associated with the idea of sleep and conditioned by peace and quiet, is often subjected to the secondary stimuli of hilariousness rough play the reading of exciting stories and a group of conditions that spell insomnia Healy felt that lying and stealing were often behavior reactions of a secondary order the initial one being the powerful reaction to sex information received under certain gang conditions A dog phobia was aborted in a child by associating a pleasant stimulus with the dog The dog was permitted to come closer and closer, while the child was being fed The final link in the newly forged chain of conditioned reflexes was the feeding of the child with its hand resting on the head of the dog All psychiatrists have seen in adults fixed and irremovable phobias that had very simple beginnings and could have been aborted in childhood

The theory of the punishment of children should take account of the conditioned reflex There should be a clear appreciation in the mind of the child that the punishment has to do with and is the direct result of, the particular wrong deed that has been done It might be added that punishment should never be cruel or retaliative and it should never be unduly delayed The mother who says to a child When your father comes home I am going to get him to whip you is breaking every principle of psychological common sense by permitting the child to remain for a long time in the grip of fear Punishment should never be threatened and not given Children do not respect people who do not keep promises even though they may love them If the punishment occasions loss of control in the adult if it is retaliative or if it is used as an opportunity to vent ill temper arising from some unpleasantness in the life of the adult then it not only falls short of its purpose but does positive harm

Suggestibility is a weapon of great strength and flexibility and should be used constantly in shaping the personality of the child It is a double-edged weapon It should be used with bold strokes to bring out sug-

handicapping strong inferiority feelings are to an adult An yet usually he can do something about it With help it is often possible to ease the friction somewhat by slight modifications of the environment or changes in the personal life On the other hand the child is well nigh helpless His avenues of escape are very limited It is not so strange then to find children lying stealing, quarreling being daring about sex manifesting various neurotic traits and so forth in the effort to compensate for nagging feelings of inferiority and to find a place in the sun

Inferiority may have various beginnings Often it is organic Either the child is organically inferior or is made to feel that he is We know how expert children are in making verbal caricatures of each other, how unerring they are in finding physical defects in playmates, how readily they call a child who has some difficulty in walking limpy , how promptly children who wear glasses are dubbed *four eyes* A sense of inferiority seemingly may have the most casual beginning In boarding school a chance remark by one boy about another boy s sexual organs precipitated an obstinate disabling and long-continued personality belittlement and neurosis Anything that makes the child feel ashamed not only of himself but of those with whom he is intimately associated poor surroundings divorce of parents drinking in the home and so forth any one of them is sufficient to start trouble Even intellectual brilliance in a parent unless there is common sense in the household may harmfully overshadow a child A famous psychiatrist remarked God help the boy whose father made Phi Beta Kappa! Often very obscure and complicated and frequently neurotic behavior problems in children may be readily understood if viewed as attempt to escape from the unpleasant reality of living in a world made up of innumerable concessions to others and belated efforts to regain the power of babyhood

A striking trend or potential in children is *curiosity* Only a small part of what we call education is supplied within the confines of the schoolroom The bulk of it comes from the answering of the eternal question mark in the mind of the child There is no escape for parents or any one else who has anything to do with children Their curiosity must be satisfied and it ought to be satisfied It is dangerous to block it The questions of young children should be answered simply directly and truthfully Later on it is better to direct the child to authoritative sources of information Knowledge acquired in this way adds significantly to the power of the personality

Some people who pass as intelligent still question the normality of

heretofore has been kept out of reach Here is a situation that requires skillful management and it is so critical that the wrong attitude may mar the future of the child

In the home circle and in the schoolroom we see children seeking the lost power of babyhood by trying to hold the center of the stage, by legitimate means if possible but if these fail then by misconduct The important question is how can we manage this somewhat critical developmental phase? A common error is to overemphasize it by too much attention Otherwise mismanagement usually errs in one or the other of two extreme directions In one there is too much severity Brutally the child is brought face to face with the hard fact that his days of power are over, he is harshly punished for any attempt to regain this power There is no understanding Many children who have been subjected to this extremity become so twisted in their personalities that through all their lives they are psychoneurotically frightened and defeated Others may project upon society the ill usage they have received and become bitterly antisocial and dangerous agitators

The other extreme is the spoiling process Unwise and very questionably kind adults may permit children to hang on to their babyhood power overlong A particular child the favorite' or often an only child is permitted to remain in the highly artificial position of continued dominance Other children are made to concede beyond reasonable limits one or the other parent is forced to give in Hurts are assuaged by more and more concessions Finally comes the day, when the spoiled individual must face the actual conditions of life It is too late He cannot do it It is almost inevitable that he will be defeated The habit pattern has been laid down There is a childish neurotic attempt to gain the center of the stage and the environment meets it by indifference or active opposition The final result is either a bitterly disillusioned retirement from the world of adult emotional relationships or perhaps the learning over a long period of time and in a pathetically trying and sad way a lesson that could have been taught much more naturally and with much less difficulty in childhood

When persistent efforts to hold power constitute an attempt to compensate for a sense of *inferiority* then we have a very difficult and complicated situation What is a sense of inferiority It is an emotional pattern that forces the individual consciously or unconsciously constantly to compare self with others or in a broader sense with the environment and always to his own belittlement We know how

present plane of our civilization. As an objective fact, many manifestations of savagery may be observed in children. During this phase love of nature and self reliance should be taught and a reserve of physical strength should be gathered. It is a useful weapon in combatting neurotic traits in children.

Savagery inevitably raises the question of *competition*. Competition may be unfortunate but in life, as we know it, it seems impossible to escape competition. The best we can hope for is fair play in the fight. The way to prepare for competition is to teach competition. In the games and activities of childhood teach fair play and honesty and unwillingness to take unfair advantage but leave to the child some satisfaction of victory. Modern life has recognized the claims and needs of savagery. There are Boy Scouts, summer camps, athletic competitions and the like. These are the normal outlets for so-called "animal spirits" and helpful in a healthful *redistribution* of attention that is becoming neurotically circumscribed.

Another personality potential is called *romancing*. Although it deals with untruth, it is not the telling of a lie. Only if it is unduly prolonged beyond the normal phase *does it become lying*. Romancing is the budding of the faculty of imagination. In children it is apt to come out in the telling of tall stories that would have shamed the fame of Baron Munchausen. It must not be brutally crushed. If in effect you say to the child "*That is a lie and you are a liar*," then you are distorting or even destroying something potentially beautiful that is just beginning to grow. The child can be taught truthfulness gradually, tactfully, skillfully. For one thing, this is the time to introduce the mind of the child *to good literature*. There *compensation and outlets will be found* for this rapidly growing faculty of imagination.

It is in the consideration of these and other factors that one may hope to find preventive and early therapeutic measures in the problem of the psychoneuroses. *Childhood neurotic displays cover a wide range** and the conditions under which they appear are quite varied. It is not within the province of this contribution to consider these details nor their

* Personality difficulties expressing themselves as involuntary part dysfunctions: Constipation, enuresis, encopresis, tics. Personality difficulties expressing themselves clearly as whole dysfunction: Unhealthy emotional responses. A. Anger—a, breath holding spells; b, temper tantrums. B. Fear and Anxiety—a, sudden terror; b, palpitation; c, acute fear of death. Antisocial behavior arising from a desire for attention—Disobedience, resistance, imitation of adults, lying, truancy, destructiveness, etc. Sexual—masturbation, *habitual manipulation of parts of body*. Thumb sucking, *nail biting*, etc. Various sleeping and eating problems. Disorders of speech and writing.

sex curiosity and cannot understand why it should be relatively stronger than all other kinds of curiosity. They are horrified at the child who wants to know about his sex organs or the sex organs of his little sister, and if he is bold enough to examine, they are aghast. The reason is simple enough. Sex is one of the strongest potentials, strong enough to be dignified as an instinct. Naturally it will soon begin to unfold itself. The second reason is an artificial one created by adults. The subject of sex is clothed in mystery. So far as children are concerned, we have made it a forbidden subject. Too often there is a hush and an air of mystery when a child intrudes upon any discussion of sex. It should not be difficult for us to understand that curiosity, held back, checked, made difficult of satisfaction, at once becomes redoubled. So here is the answer. Children are more curious about sex than about other things, first because sex is a dominant instinct, and it would be psychopathological if it did not call forth curiosity; secondly, it has been made extremely attractive by concealment.

What should be done about sex curiosity? There should not be formal lectures to children, and I doubt the wisdom of having children analyzed. The answer lies chiefly in the atmosphere created by the adults in the home. If the atmosphere is such that children do not hesitate to ask natural questions about sex almost as easily as they ask questions about other things, then the right foundation has been laid for sex information. Perhaps this is the one most important thing that can be given to children. The neuroses of adult life are very complicated and difficult to unravel. To the square inch I believe they contain more ignorance, misinformation and bad habit formation about sex, dating back to childhood, than any other ingredient.

There are available many sources of sex information suitable for children. A study of the comparative sex life of plants and animals, zoological gardens and a few good books are valuable aids. Finally, it is good practice for each parent to have from time to time frank talks about sex with the children. Begun in a very simple manner, they will naturally grow in complexity and will be a constant source of real help. In this way something will be added to the personality that in adult life will pay immense dividends in the shape of mental security, health and happiness.

Another potential is *savagery*. What is savagery? It has been thought to represent condensed recapitulation of the long phase of primitive savagery through which we passed in order to reach the

fatigue or tension etc for which no satisfactory organic reason can be found indicate much more commonly the incipiency of a psychoneurosis By an anticipatory attitude psychogenically is meant an appreciation of fundamental facts, that physical symptoms like headache nausea dizziness etc , are not always organically determined but are often emotionally conditioned, that often there are driving forces trends and desires in human beings that cannot be reconciled that they may produce inner frictions or conflicts of which the individual either may not be aware or may apprehend very imperfectly that without solution such conflicts often find pathological adjustment in the development of a psychoneurosis An environmental anticipatory attitude implies an appreciation of the destructive effect and psychoneurotic determining force of serious environmental situations Many individuals rebel against such situations for a certain period of time then with no solution available there is unconsciously found a refuge in the haven of a psychoneurosis In this connection and likewise from the standpoints of psychoneurotic predisposition precipitating factors and early and common physical and mental findings the following table based on an analysis of 39 psychoneurotics is of interest

1 Psychoneurotic predisposition is determined to some extent by
   (a) Unfavorable early home life (70% of cases)
   (b) Constitutional predisposition (85% of cases)
   (c) Chronic disease sex conflicts, financial difficulties, restricted outlets and mental defect play a leading part in from 3% to 1 % of all cases

2 The most common precipitating factors in the psychoneuroses are
   (a) Sex disturbances including conflicts over masturbation illicit intercourse puberty and the menopause [illegible]%
   (b) Accidents with or without injury 13%
   (c) Marital crises 1[illegible]%
   (d) Financial crises 11%
   (e) Operations 10%
   (f) Death or illness in the family each 9%

3 The commonest physical findings are
   (a) Operative scars 3%
   (b) Focal infections 9%
   (c) Physical defects including developmental anomalies and operative amputations, 9%

individual management The discussion that has been given indicates principles, and perhaps from their appreciation there will come an understanding of the situations which call out neurotic manifestations in children and will suggest techniques of early treatment

In all disease the problem of etiology should be placed on the basis of how much is emotional and how much physical rather than on the "either or" concept A number of illnesses with organic changes have psychological aspects of great importance and these have been studied extensively from a psychiatric point of view These diseases, including peptic ulcer, essential hypertension mucous colitis, ulcerative colitis asthma hay fever and many dermatoses occur in people with emotional conflicts of certain patterns e g repressed hostility in cases of essential hypertension and deep dependent needs in peptic ulcer victims These diseases have become popularized under the name "psychosomatic medicine" with the etiology postulated as follows, with repeated emotional energy discharges over the autonomic pathways smooth muscle spasm often associated with ischemia and consequent structural tissue change results in permanent alterations There are many unknown factors, as the selection of specific organs as the site for the discharge of conflicting emotions Why the skin is chosen rather than the small blood vessels, or why the upper gastrointestinal tract rather than the smooth muscle of the bronchioles, await future research

Psychoneuroses in Adults

The psychoneuroses either in pure culture and more largely as functional additions to organic disease constitute such an enormous segment of medicine in its general and special practice that it is proper to expect from the modern physician an anticipatory attitude This anticipatory attitude should be fourfold a historical, b physical, c psychogenic d environmental It is remarkable how often in the practice of medicine the handwriting is on the wall in one or two or even all of these respects and yet how rarely it is seen Histories of patients, who have been diagnosed falsely and who are being treated for nonexistent somatic diseases are often replete with outcroppings of neurotic symptoms during childhood All too often the presence of various symptoms and sensations which cannot be given even after exhaustive investigations an organic implication do not suggest as they frequently should a functional aspect Likewise should the vague complaints of

taking becomes essential and its importance is enhanced by the fact that it has definite therapeutic value

It must be remembered that the treatment of the neurotic patient begins at the first instant of contact between patient and physician Hurry carelessness impatience unwillingness to make case notes etc not only deprive the psychiatrist of needed knowledge but also prevent the establishment of proper relations with the patient without which nothing constructive can be accomplished It is customary to state in text books that the attitude of the physician should be strictly an impersonal one Fortunately it is practically impossible to acquire such an attitude It implies a remoteness and detachment or at best a cold intellectual curiosity on the part of the psychiatrist while in reality what is urgently needed is warm interest in the difficulties of the sick individual Such interest is not maudlin sympathy but it does have in it an emotional element without which little progress can be made

An important part of treatment is history taking This may be conveniently divided into the family history the history of the patient the social environmental history and the history of the neurosis It is often good practice to devote a preliminary period to listening to the account of the nature of the presenting symptoms The patient is apt to be tense worried anxious to unburden himself and he will obtain a certain measure of relief in being able to describe the troublesome symptoms It is advisable to let the patient talk himself out not only at this time but also when he is giving the several divisions of the history Should he become too circumstantial it will not be a difficult matter to turn him back to the main thread of the narrative However it is not the part of the physician to make too many suggestions or to supply missing links in the chain of the historical account The details of the various aspects of the history need not be repeated at this point It may be recognized as incomplete unless the psychiatrist emerges from the interview or series of interviews with a clear mental picture of the ancestry of the patient of his previous life in which there are always to be found one or more factors which have influenced the development of the neurosis and of his social environmental relations in which likewise there are to be discovered maladjustments which may have a bearing on the pathological situation

The history of the neurosis usually needs to be exhaustive The patient should try to assign a date which is usually not the actual date for its beginning The setting immediately personal and environmental

4 The commonest mental findings are
   (*a*) Overconcern expressed regarding the symptoms complained of, 89%
   (*b*) Anxiety 45%
   (*c*) Fears including fear of disease, death insanity etc, 33%
   (*d*) Marked hypochondriacal trends, 19%

5 The most frequent characteristics of pre-hospital treatment are
   (*a*) The patient had been seen by many physicians in 54% of the cases
   (*b*) Operations were resorted to in 19%
   (*c*) Sedatives had been employed routinely in 1[illegible]
   (*d*) Quacks of various kinds had been consulted by the patient in 10%

Psychoneurosis and Psychosis

Given the development of symptoms that have nervous import, it is quite important to attempt to determine if possible whether a psychoneurosis or a psychosis is in the making They have very different prognostic and therapeutic significance A psychoneurosis is essentially different from a psychosis The psychotic is profoundly shaken in his whole personality and sometimes disintegrated, there is a deep cleft between self and environment, and reality for him is disturbed distorted and even abolished In the psychoneurotic there is only a partial personality altering and environmental contacts remain real and relatively undisturbed With Meyer we see the psychoneuroses as part reactions halfway places between normal and psychotic maladaptations to be sure but nevertheless compromises that recognize and concede the claims of reality Finally from the standpoint of insight, the capacity to stand off and look in survey and judge even if not understand here the psychoneurotic overwhelmingly demonstrates his freedom from psychosis

Early Manifestations of the Actual Psychoneuroses

It is somewhat difficult to determine the symptoms that really initiate the psychoneuroses particularly since an outstanding symptom as for instance the fear of being alone may have eclipsed the beginnings of the neurosis in the mind of the patient In this connection careful history-

Characteristics of Post-amnesic Period	*Organic*	*Hysterical*
1 Memory loss	Characteristically a complete loss of memory for all events during period of fugue *which cannot be re*constructed by any means whatever	Characteristically a complaint of complete loss of memory for events of fugue *episode but isolated events* during the fugue may be remembered and all events can be reconstructed completely by associative methods or hypnosis. Events preceding the period of amnesia usually are clearly remembered.
2 Personality type	Often distorted into instability and irritability accompanying organic brain disease Not necessarily typical of any personality syndrome.	Typical hysterical personality type with hypomanic or depressive characteristics and often showing other functional disturbances during interval between fugues
3 Physical examination	May be similar to that during fugue period	May be similar to that during fugue period
4. Serological	There may be specific evidence of syphilis or other organic brain disease by increased spinal fluid protein and cell counts positive Wassermann etc or often in epileptic cases definite electroencephalographic changes	Characteristically normal findings.

analysis it is merely history taking but it is a kind of history taking which in our experience frequently discovers valuable clues Whether or not an exploration of the unconscious mind is contemplated there is always important material in the conscious mind or at least within the mental territory open to recollective effort which may be had for the asking

Probably the three most common and earliest manifestations seen in the psychoneuroses are anxiety fatigue and tension Anxiety has an exceedingly wide distribution making up the whole of the anxiety neuroses a large portion of the compulsion neuroses and being very fre

which existed at that time, should be closely scrutinized. Each major symptom should be retrospectively reviewed from the time of its initiation and the incidents within and without the patient which heralded its appearance should be noted. The patient should be invited and encouraged to give his opinion concerning causal factors. "I don't know of any," etc. should not be permitted to pass unchallenged. He should be urged to recollect and to venture an explanation. All this is not

POINTS IN DIFFERENTIAL DIAGNOSIS BETWEEN ORGANIC AND HYSTERICAL AMNESIC PERIODS

Characteristics of Amnesic Period	*Organic*	*Hysterical*
1 Onset	Usually abrupt and sharply defined. If precipitated by head injury there is often also amnesia for events preceding the injury for two or three hours	Usually given by patient as abrupt but frequently there is some vagueness as to exact time of onset. No loss of memory for events preceding onset
2 Recovery	The actual period for which there is amnesia usually disappears suddenly over a period of one to two hours a day often after a profound sleep. Mild confusion with difficulty of orientation may persist for a day or two afterward	Recovery very abrupt with mental clearness and accurate orientation. There may be some vagueness as to time of actual termination of amnesic period
3 Precipitated by	Occur spontaneously or following actual head injury and may occur at any time	Almost invariably precipitated by definitely traumatic emotional experiences
4 Behavior	Often confused and bizarre with evident lack of motor control. Often dissociated cruel or gruesome acts or delirium	Usually purposeful and carrying out a continuous project associated with some definite previous experience in patient's life. Contact with surrounding maintained
5 Physical examination	Will often show evidence of head injury, brain tumor, focal or general neurological *signs*, etc.	Reveals no characteristic picture. Often there is constriction of sensory functions. Most commonly contracted visual fields or localized atypical losses of tactile sensation

Finally it must be remembered that any psychoneurotic symptom may initiate a psychoneurosis In protean hysteria any of a great number of motor sensory or somatic symptoms are among the possibilities They are not explainable on the basis of central or peripheral nerve pathology or somatic disease In neurasthenia there may be a concentration with resultant symptomatology referred to any system or any organ of the body In the compulsion neuroses obsessive thinking or behavior with infinite variation as to subject matter may open the scene In the anxiety neuroses any of a vast number of special fears may be the first phenomenon

Occasionally specialized techniques like word association tests or the association motor apparatus of Luria as modified by Haugh are valuable in the detection of the beginnings of the psychoneuroses

Traumatic Neuroses

Of all the neuroses those that are precipitated by trauma probably are the most inefficiently managed and have the most chronic consequences Yet in similar situations in the World Wars the treatment record was a brilliant one The difference is due to two facts, the war neuroses were brought under treatment very promptly and the compensation factor was not prominent After trauma there is frequently a no man s land half-way between consciousness and unconsciousness It seems probable in certain traumatic neuroses that during this twilight state while unconscious mechanisms are shaping the conversion into objective physical signs there is still the intrusion of conscious or at least semi conscious elements perhaps partly repressed and partly admitted but nevertheless having a bearing It is possible that among these conscious elements not in any clear deliberate and malingering fashion but vaguely and indefinitely there are nevertheless elements that concern compensation The ideal time to begin the treatment of the traumatic neurosis is as soon as the patient begins to emerge from the twilight zone for then the neurosis is still taking shape and the mind of the patient is very malleable under the tool of suggestion Later frankness is advisable and the patient should be told positively and without qualification as to when his wound or injury should recover If the question of compensation complicates the treatment the physician should attempt to have it adjusted in a just way as soon as possible Delay is unwise creating a period of uncertainty on the basis of which

quent in many other neurotic states The anxiety may arise spontaneously or may follow an emotional upset due to some rather insignificant happening The anxiety is intensely real to the patient Sometimes it is vague and indefinite consisting of the simple fear that something inexplicable will happen at others there is the fear of some impending disaster of heart failure insanity cancer apoplexy other sudden death etc ' Anxiety invariably ensues in the compulsion neuroses whenever the individual cannot give free play to his obsessive ideas or his protecting ceremonials are broken up and inevitably accompanies or follows phobias when the sufferer cannot defend himself against them During the acute attack the heart palpitates violently there is a choking feeling in the throat sometimes of a lump sticking in it or traveling up and down breathing is rapid or labored the patient trembles all over feels dizzy and faint cannot think or concentrate upon anything and has a feeling of dying or going out of his mind The face appears anxious pale or flushed the blood rushes to the head cold sweat often covers the body the limbs especially the hands and feet, feel numb or dead the patient has frequent desire to urinate or defecate and occasionally has diarrhea or vomiting After a variable period during which the patient is frantically begging for help and wants to be surrounded by his family the attack tapers off and following hypodermic or other medication fortified by repeated assurance of the physician the acute demoralization subsides Not every attack of anxiety is characterized by all the manifestations just enumerated but many are and the first one is generally apt to be the most severe" (Wechsler)

Tension described under various synonyms by the patient perhaps the most frequent one being tightness inside is often an early phenomenon of neurotic states It is one of the physical expression patterns of milder anxiety and frequently occurs in neurasthenia Fatigue like anxiety, is widespread and commonly occurs early in neurasthenia Naturally it must be differentiated from the fatigue of organic disease It tends to be curiously selective in that the patient is too tired ' to make even the simplest movement but may be animated and energetic in relating the neurasthenic symptoms Not so very infrequently hysteria may be inaugurated by an amnesia The preceding table Points in Differential Diagnosis between Organic and Hysterical Amnesic Periods may be helpful in the necessary differentiation between an hysterical and an organic amnesia

these pathological conditions are instrumental in producing a neurosis or even whether they are influential at all Such morbidity is to be found on careful examination and *therefore, careful examination becomes a matter not of belief but of conscience and medical ethics* Adherence to any particular doctrine does not remove the responsibility for determining the actual physical status of the patient Therefore failure to treat thoroughly any organic disease which happens to be present at the beginning of a psychoneurosis is inexcusable

Myerson would go farther and believes that a frontal physiological pharmacological attack on the badly working organ or organs may interrupt the revolution of the vicious circle Even though we gain no insight into the actual causation of a neurosis by the study of the physical symptoms which accompany it we are enabled to understand the clinical picture better We may ask of a mental state in how far does it disturb the bodily function the great organic machinery of the body And since it is true that a mental state may alter digestion (by this theory it is in part altered digestion) it is perfectly conceivable that by altering the digestion we may in turn change the mental state or at least hasten the resumption of equilibrium In the circle of events which is the relationship of mind and body therapeutics applied at any point may alter the entire circle

At the beginning of a psychoneurosis after the physician is thoroughly familiar with the historical the physical the environmental and psychogenic data there is an important decision to be made as to whether or not the psychoneurosis may not respond to skillful and adequate first aid treatment Rest house and sanitorium care is lengthy and expensive and psychoanalytical therapy calls for a large expenditure of time and money We are convinced that a considerable number of psychoneurotic states may be successfully handled by dealing with them rather directly and positively over a short period of time For instance there are many anxiety states and even panics particularly in boys due to masturbation which can be resolved by desensitizing the child to the shame reaction and a careful and simple explanation of the physiology of the reproduction apparatus So are there other fears of many varieties especially in children which may be dealt with on a rather simple explanatory basis A little boy of ten developed a fear of kidnapping with well pronounced anxiety symptoms An explanatory talk lasting not more than an hour served to remove these symptoms One of us has found that the psychoneurotic conditions particularly anxiety states that occur with great

a neurosis may come to the surface It is unquestionably true that numerous examinations which are made by various medical representatives prejudice the patient's treatment and recovery With his mind already prepared for a neurosis the repeated examinations and disagreements have a very unhappy effect

Treatment of the Beginnings of the Psychoneuroses

Various therapeutic considerations already have been introduced In the consideration of the early potentialities and manifestations of the psychoneuroses those situations which occur so frequently in childhood and affect so tremendously the developing personality were pointed out and their management was stressed This constitutes the effective treatment of the very beginnings of the psychoneuroses since they truly begin in the early years of life It was suggested too that therapy began at the first moment of contact between patient and physician and therefore, proper history taking is quite important in the early therapeusis Also, the value of the immediate treatment of the traumatic neuroses was emphasized

The point of departure for the treatment of the psychoneuroses in the early stages is properly along physical lines While it is perfectly true at the present time that the more fruitful therapy is developed from psychogenetic concepts and it is true too that a causal relationship between neurotic symptoms and organic disease is very dubious yet this does not absolve the psychiatrist from the responsibility of a thorough physical examination In our experience there is evidence of definite somatic disease in almost 50 per cent of the patients who suffer from psychoneuroses This consideration becomes doubly imperative when one remembers that the practitioner in general medicine and in its specialties, other than psychiatry is more apt to see patients who have functional additions to organic disease than pure neuroses In our statistics the following morbid conditions are constantly repeated, endocrine dysfunctions tuberculosis syphilis extensive dental abscesses organic heart disease often with beginning decompensation post influenzal states arteriosclerosis anemia combined heart and kidney diseases osteo arthritis sinusitis infected tonsils extreme visceroptosis chronic Neisserian infection nephritis, chronic appendicitis suppurative otitis media prostatitis gastric and duodenal ulcer early gastric carcinoma lead poisoning floating kidney, etc It is not a question as to what degree

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The point of departure for the treatment of the psychoneuroses in the early stages is properly along physical lines While it is perfectly true at the present time that the more fruitful therapy is developed from psychogenetic concepts, and it is true too that a causal relationship between neurotic symptoms and organic disease is very dubious yet this does not absolve the psychiatrist from the responsibility of a thorough physical examination In our experience there is evidence of definite somatic disease in almost 50 per cent of the patients who suffer from psychoneuroses This consideration becomes doubly imperative when one remembers that the practitioner in general medicine and in its specialties, other than psychiatry is more apt to see patients who have functional additions to organic disease than pure neuroses In our statistics the following morbid conditions are constantly repeated, endocrine dysfunctions tuberculosis syphilis extensive dental abscesses organic heart disease often with beginning decompensation post influenzal states arteriosclerosis anemia combined heart and kidney diseases osteo arthritis, sinusitis infected tonsils extreme visceroptosis chronic Neisserian infection nephritis chronic appendicitis suppurative otitis media prostatitis gastric and duodenal ulcer early gastric carcinoma lead poisoning floating kidney, etc It is not a question as to what degree

explanations of elementary psychopathological mechanisms were sufficient to place this patient well on the road to recovery

Psychotherapy —It seems justifiable to believe that the more valuable methods of treatment are embraced under the category of psychotherapy and therefore in practically every psychoneurotic patient there must be the application of some form of psychotherapy at the very beginnings of the illness There is often a good deal of speculation as to what is said and what is done when the psychiatrist visits a patient whom he is treating for a neurosis Much of it comes under the head of psychotherapy Psychotherapy may be broadly defined as an effort to influence in the right direction the attitude of the patient to influence his attitude toward himself toward his mental and physical processes toward his environment It is an effort to teach him to understand himself his illness and the cause or causes of his illness whether this cause or these causes lie in his body in his environment or in the superficial or deeper layers of his mental life Those who appreciate some of the contributions of psychoanalysis to medical thought cannot but regret the insistence of certain enthusiastic psychoanalysts of the Freudian school to the effect that all useful psychotherapy is included in one system Also it is hard to understand why the belief that a certain measure of suggestion enters into every method of psychotherapy even into Freudian catharsis should be regarded as a reproach It may be freely granted that mental catharsis faithfully attempts to minimize and even exclude direct suggestion but surely it cannot wholly delimit and exclude the interest of the analyst in the patient nor can it prescribe and control the expression on the face of the analyst the inflection of his voice his gestures etc Perhaps it is fortunate that it cannot since the indirect suggestion that flows from the intangible and imponderable rapport existing between patient and physician is of considerable therapeutic value It is somewhat difficult to see how the hypothetical psychiatrist thinking only with his *intellectual mind* and not at all with his *emotional mind* could really understand and help a neurotic patient So there is worth while psychotherapy in every contact between patient and experienced psychiatrist Whether this psychotherapy will consist largely of cooperation or superficial analysis or deep probing will depend not only on the convictions of the psychiatrist, but also and perhaps chiefly on the needs of the sick individual

Psychotherapy includes the more or less common sense methods

frequency in medical students often respond readily to explanation and persuasion. A fine, young, third year student broke with a severe anxiety attack apparently precipitated by a statement made by his professor in a lecture to the effect that one of every twenty-four individuals was destined to become insane. For a week before he sought help he was unable to sleep more than an hour at night and could not pursue his medical studies because of his intense concentration upon his every thought and sensation and his analysis of them and their possible significance as mental symptoms. There were several severe anxiety crises. Two interviews during which the entire situation was carefully and calmly reviewed and in which there was an iteration of the difficulty together with desensitization and persuasion were quite sufficient to overcome the neurosis. It has been found by one of us in the Mental Hygiene Department of a large university that these "anxiety states" make up the largest percentage of emotional maladjustments. Fear, anxiety, nervous tension, insomnia and inability to concentrate destroy scholastic efficiency, and the danger of academic failure becomes an added factor. No group of psychiatric cases is more satisfactory to deal with therapeutically. Often a few interviews are sufficient to reorient the student and assist him to regain his emotional stability.

A man of 35, in fine physical condition gave the following history. One night while attending the moving pictures with his wife, he suddenly felt a wave of intense heat suffusing his head. He had never before had any neurotic manifestations and had always been in extremely good health. His reaction to the sensation was one of such intense anxiety that he could not think straight and his first conscious thought was, "My God! It is angina!" Since that time during the last four months, he has often had anxiety attacks. They follow sensations of various kinds in his left arm and left chest which are always associated with the frightening idea of angina. During the last two months his entire life was occupied with subterfuges and devices which would enable him to keep as close as possible to physicians or to telephones by means of which he could summon a physician. A careful heart examination together with an electrocardiogram made no impression on the anxiety. In the history we related that ten months before his first attack, his mother-in-law, of whom he was very fond, had died suddenly of heart disease, and four months later his brother had dropped dead of angina. Several treatment sessions which were marked by frankness and

she saw or heard of blood was enabled completely to overcome this tendency. This procedure is especially valuable in the symptomatic treatment of fear reactions.

4 *Re education* is carried out in connection with all of the above procedures. It is essentially the development of clear insight on the part of the patient into the mechanism of his illness, the establishment of new habits of response as in desensitization, and the formulation by him of an adequate industrial, social, recreational and activity program to ensure future stabilization.

5 In addition to the above it is often advisable to desensitize the patient's family to his illness and re educate them into new habits of response toward the patient.

6 All contributing physical factors are corrected as far as possible. Measures for their correction are instituted at the earliest possible interview and are utilized as psychotherapeutic aids.

The above procedures, to be carried out intelligently, require that every individual case be formulated in terms of its causative factors in such a way that those factors which can be modified are emphasized and become the center of attention. Factors which cannot be altered are recognized as such and the patient is trained to tolerate them. We have found such procedures to operate successfully in the large majority of our cases.

It is in the field of the psychoneuroses that formal psychoanalytic therapy should have its largest application. There will naturally be differences of opinion as to how large a segment of psychoneurotic patients should be analyzed from the very beginning. We believe that when the neurotic symptom complex constitutes a serious disability and that when other methods of psychotherapy leave it untouched, then, after proper explanation to the patient and furthermore when no contraindication to analysis exists, this method of therapy should be recommended.

A valuable method for brief psychotherapy is narcosynthesis, also termed narcohypnosis and narcoanalysis. With the aid of sodium amytal or sodium pentothal by intravenous injection, higher cortical inhibition is abolished, at which time the patient talks (i e ventilates) spontaneously or is prompted to discuss his difficulties. An opportunity is thereby afforded the patient to re enact a traumatic incident or to discuss psychologically painful material without the binding forces of shame, embarrassment and memory loss. Following the interviews under nar

evolved by the American school of psychiatry, especially by Adolf Meyer The procedures involved in this method are as follows

1 *Establishment of Rapport between the Physician and the Patient* —This rapport, to be effective must be based on a certain amount of respect and confidence on the part of the patient It is best furthered by a careful investigatory program instituted by the physician at the first interview *The more completely the history, physical examination, mental examination, serological and blood tests are done, the more the patient feels he can depend on the results of those examinations* The physician must be quite frank in the matter It is quite proper to tell the patient that before any final opinion can be given it is necessary to complete the study of his case This causes no difficulty, *provided the physician has a definite investigative procedure outlined and starts the patient on it at once* Any patient is willing to wait for accurate information before the physician begins treatment

2 *Aeration* or *ventilation* of the conflict material presented by the patient may be carried out by means of Freudian catharsis by means of direct interviews by means of discovering and probing for such material from outside sources by hypnosis or by any other method The important thing is that the patient is given an opportunity to discharge and bring out in the open all of those life experiences which have been causing him serious concern either consciously or unconsciously

3 *Desensitization* is the procedure wherein the patient is required to face frankly the traumatic and unpleasant experiences of his past It is brought about, in the first place, by causing the patient to discuss at frequently repeated interviews the conflict material as elicited above These interviews are repeated until the patient can review these experiences without excess emotional concern *Normal emotivity is to be expected, however, and it is not desirable, or necessary, to expect a complete loss of emotivity in connection with those events that should normally cause concern* It is the excess concern that is pathological and requires to be relieved

The term desensitization is also applied to the procedure carried out in relieving fear or other symptom manifestations in definite situations Here the patent is required to face the situation repeatedly, until he no longer manifests the symptoms in that situation or until he is able to tolerate or ignore the symptoms if they occur It is necessary, of course, to encourage and reassure these patients repeatedly while this procedure is carried out On such therapy a young girl who fainted every time

does not become too dependent on the schedule It is the custom of the authors as improvement becomes more marked to include choice periods that is from time to time the patient himself selects what he shall do Furthermore it is advisable to explain that a schedule is only a temporary help useful during the time when the physician must think for the patient and helpful in overcoming faulty habits and rituals Thus the patient is stimulated to hasten the appearance of that day when he can think for himself and carry on alone

Unquestionably the backbone of the schedule is *occupational therapy* A psychoneurosis constitutes a compromise with reality and conversely it is a courting of unreality Occupational therapy is an extremely valuable and necessary treatment adjunct not only because it tends to divert the mind from the vicious circle of thinking that gets nowhere but because too it is constantly symbolic of reality attractively garbed and it produces concrete fruits of work A carefully worked out progressive occupational therapy program can be of incalculable help in treatment There are many instances in our experience in which occupational therapy has been a major factor in the psychological rehabilitation of the patient

The details of treatment are matters of universal medical knowledge but they must be employed early thoroughly and exactly Some of them will be found useful in every case These include hospital or rest house care rest in bed scientific nursing dietary control massage hydrotherapy electrotherapy physiotherapy a supervision of patient s activities including visitors, correspondence reading graduated exercise tonic and in some conditions hypnotic medication etc It must be stated that frequently the way in which these measures are administered renders them ineffective and useless There must not be anything careless haphazard or uncertain about any detail of treatment They are exact therapeutic procedures, and if not given exactly and precisely they not only lose their intrinsic therapeutic significance but also the added psychotherapeutic value which they possess

MENTAL DEFECT

Importance of Early Recognition

A few considerations will make it obvious that the recognition and treatment of the beginnings of mental defect are extremely important

cosis the material elicited is reviewed with the patient, and further desensitization is accomplished This method was used effectively and extensively during World War II and has been reported on by many civilian psychiatrists since

As a method of psychotherapy for the treatment of large numbers of cases where there were few psychiatrists, group psychotherapy became a useful adjunct during World War II and is being used more and more in civilian practice particularly with veterans The methods employed are varied but generally consist of group participation in discussions with the psychiatrist as the group leader These group discussions are given in a setting of a well rounded interesting daily program of activities Special variations of group psychotherapy include psychodrama and the use of audiovisual aids such as charts and moving pictures

There are conflicting reports on the use of the drastic therapies in the psychoneuroses The reactive depressions however do very well with electroshock and of all the neuroses the obsessive ruminative states have been selected as the field of greatest activity in psychosurgery with Freeman and Watts[16] reporting 61 per cent good results and 35 per cent fair results in a series of 51 patients

There is scarcely a psychoneurosis which must not be dealt with from the standpoint of a consideration of the environment of the patient Such a consideration becomes a part of early treatment It is quite true that any highly artificial rearrangement of the environment is impractical and improvement obtained under such conditions means nothing On the other hand there is scarcely a psychoneurotic patient in whose environment there are not serious frictions and obstacles which in fairness to the patient should be smoothed and adjusted

An important part of the early treatment of the psychoneuroses in many instances is the giving of a *schedule of daily activities* to the patient Usually when the patient finally seeks the aid of the physician, his mind has become infinitely wearied by emotional cross currents so that the making of even the smallest decision becomes overwhelmingly burdensome Perhaps this is particularly true in the anxiety states in which the patient has often made a terrific struggle to meet the expectations of his environment in the face of the strongest inhibiting emotional feelings The schedule must be a growing thing in order to be effective It must take account of the progress of the patient and therefore must be continuously modified There must be care exercised that the patient

L Conjunctivitis at time of examination
T Transverse palmar line on either hand
G One crease only on minimal digit of either hand

Again in certain birth injuries the resultant manifestations may carry distinctive markings as in Little's disease or congenital athetosis In certain types of congenital lues the phenomena are so obvious that he who runs may read In juvenile paresis for instance the diagnostic issue may be readily resolved by a serological test and a neurological examination In microcephaly the head is small the cephalic index averaging 0 75, the convolutional markings are simple and the brain weighs only 800-900 gms On the other hand in hydrocephaly there is an evenly distributed swelling of the cranium with a fluid content sometimes amounting to more than 000 c c In cretinism a condition due to insufficient thyroid activity and producing about 4 per cent of institutional defectives, there is a resemblance to mongolism but in cretinism the cephalic index is high while in mongolism it is normal or low Amaurotic family idiocy is rare but is constantly associated with profound mental defect The infantile type begins in the first year There is degeneration in the macular region of the retina (cherry red spot) eventuating in blindness flaccid paralysis with wasting of the limbs and death usually at the age of two The juvenile type begins later and its progress is slower It occurs mainly in the Jewish race

Other rarer conditions in which there is fairly frequently mental defect and in which too the physical and neurological criteria are clear-cut include porencephaly epiloia neurofibromatosis and nerve degenerations that are somewhat hereditarial pseudohypertrophic muscular dystrophy Friedreich's ataxia Schilder's disease (encephalitis periaxialis diffusa) Wilson's disease (progressive lenticular degeneration) Frolich's syndrome (dystrophia adiposo genitalis) certain adiposities and gigantism of pituitary origin and the Laurence Moon Biedl syndrome occurring in siblings and marked by retinitis pigmentosa polydactyly and sometimes night blindness For more data on these conditions consult other chapters of Oxford Medicine as indicated in the Index

History and Physical Examination

Diagnostic acumen is sharpened by a state of diagnostic receptiveness For this a necessary condition is a familiarity with conditions which predispose to defect One thinks at once of such situations as mental

Mental deficiency is a highly important community problem The prevalence of feeblemindedness, in the opinion of Fernald based on numerous army tests and examinations of children in special classes in the schools, is much greater than is realized For instance, there are said to be from 40 000 to 60 000 feebleminded individuals in Massachusetts and probably in the United States there are more than half a million Furthermore, 400,000 children do not "get on" in the public school system There are about 300 000 mental defectives in England and Wales Lewis surveyed six areas in England three rural and three urban, and found an incidence of mental defect amounting to 8 57 per each 1 000 individuals in the general population the frequency being definitely higher in the urban areas The ratio of idiot imbecile and moron was as 5 20 75 While inheritance is admittedly important, it is becoming increasingly evident that eugenics can scarcely hope to solve the problem of feeblemindedness For instance such an eminent authority as Penrose believes the sterilization of all mental defectives would only lessen the incidence by five per cent Many authorities, however, are more optimistic concerning a eugenical program

It is reasonable to assume that for many more generations to come mental defect will continue to be an enormous economic and social burden Since it is clear that a restricted plan of segregation is scarcely feasible and since too prompt recognition and consequent early treatment measurably reduces the economic burden and minimizes the social hazards it becomes the duty of every practicing physician to be able to recognize as soon as possible these defects in human intelligence For further discussion of this topic see Vol VII Chapt IV

Recognition of Special Types

A certain proportion of mental defect carries with it unmistakable physical markings so that it can scarcely escape detection For instance in Mongolism where the upper limit of intelligence is about seven years there soon appears the indelible stamp of the mongoloid features and skull According to Penrose the following points are characteristic

"*A* Intelligence quotient between 15 and 29 inclusive i e, the most likely range of intelligence for mongols

B Cephalic index 0 83 or higher

C Epicanthic fold on either eye

D Fissured tongue

E Conjunctivitis at time of examination
F Transverse palmar line on either hand
G One crease only on minimal digit of either hand

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defect in one or both parents or the presence of parental syphilis, alcoholism tuberculosis decided neuropathy etc Furthermore, the development of the brain may be interfered with by other factors appearing before, during and after birth Some of these factors are toxemias of pregnancy, premature separation of the placenta premature birth, birth injuries and the occurrence of infectious and deficiency diseases, perhaps particularly meningitis, poliomyelitis encephalitis, rickets, chorea and epilepsy

After full diagnostic advantage has been taken of physical and neurological abnormalities, and there has been the benefit of obvious history, there still remain a large residuum of cases which can only be solved by thorough and methodical study The history is helpful It should include the family record which thoroughly inquires into the histories of the ancestors and the siblings The age of the parents at the time of the birth of the child is important as is too the order of the birth of the child

The *personal history* begins with *conception* (Contraception? Alcohol? Other Poisoning) *Pregnancy* (Mother s health? Illness? Endocrine disorder? Drugs alcohol or other toxins? Exposure to x-ray or radium? Incomplete miscarriage? Unsuccessful abortion? Emotional condition during pregnancy Mental shocks? Etc) *Birth* (Complete history of the delivery Full term? Presentation? Instrumental? Condition of child at birth Deformities? Weight? Etc) *Post-natal* (Breast fed? Convulsions? Diseases and injuries? Age of talking and walking? Disposition? Emotional experiences? Neurotic traits? Frights? Etc) In fact there is needed a complete history of the child and its development physically emotionally and intellectually Where there are older siblings it is important to ask for comparisons with the other children at various ages The school history should be complete

Often an intensive *physical* and *neurological examination* is needed in order to find early diagnostic leads The examinations should include the nervous system and its functions particularly such deficits as deafness blindness speech defect etc vascular and respiratory systems alimentary systems sexual organs endocrine system skeletal system stigmata skull measurements general physique stature examination of urine and blood blood chemistry blood Wassermann spinal fluid etc

Psychometric Examination

Psychological tests are valuable but they need to be interpreted with judgment A diagnosis should not be made from the data of any one

test but upon many careful tests concerning intellectual ability manual ability and handicaps The following considerations should be kept in mind (1) An intelligence test is never infallible and is only approximately correct ( ) When the mental level is higher than 12 years there are many sources of error (3) A psychometric test gives little information concerning the emotions (4) Unless the child understands the requirements the test is not valid (5) Certain factors such as language difficulty lack of cooperation fear and emotional upheaval will interfere greatly with accuracy (6) Scarcely ever is a diagnosis to be made solely upon the result of the test The findings must be viewed in the light of the entire examination

The better known tests are the Binet Stanford Binet Porteus Maze Kohs Block Design Test Merrill Palmer Army Alpha tests and others (see also Vol VII Chapt IV)

Often as valuable as the psychological tests and never to be neglected in the effort to make an early diagnosis are such practical considerations as the comparison with other children particularly with siblings when they were at the same age level as the patient not only in the intellectual scale but in ordinary social relationships the ability to guard against common physical dangers the capacity to learn to manage the affairs of daily living school progress etc.

Early Treatment

In order to be at all effective therapy must be early thorough and unremitting There are certain instances in which mental retardation which may be defined as a state of intellectual backwardness due to some physical mental or environmental cause is scarcely to be distinguished from true mental defect In such instances the only hope for the child is prompt and persistent therapy We have known many instances in which retarded children were lifted to a normal level by the treatment of syphilis anemia parasitic infections heart and kidney disease infected tonsils and adenoids eye strain tuberculosis rickets and many other conditions Again sometimes it was necessary to resolve a mental conflict in the mind of the child which was absorbing all his attention and therefore preventing normal progress in school work There may be a difficult or destructive environment in the home which is utilizing energy that should be applied to the training of the intelligence

Unfortunately even when diagnosed early there are not many

opportunities for specific therapy In a few of the endocrine situations like cretinism and now and then in some of the sensory deprivation states brilliant therapeutic results are obtained in the one instance by thyroid in the other by expert training and teaching If there is congenital syphilis it should be treated vigorously Birth trauma or head trauma later in life needs the benefit of expert neuro-surgical opinion Orthopedic surgery is very helpful in many paralytic cases

In the majority of instances one must be content with something less than restoration The objective of treatment, however, is enormously important It is to minimize insofar as is humanly possible, the intellectual handicaps and even more important, to make possible for the future some measure of personal social and economic adjustment The keynote of early treatment is training and in correct training lies the only hope of obtaining the maximum of mental capacity and producing a measure of self support and satisfaction in life Training should properly begin with teaching and habit formation concerning the care and general hygiene of the body This is doubly important in defectives and if properly inculcated in the beginning it is usually retained, and life in the future is immeasurably easier for the patient and for others In the academic training the object should be to realize for the child his potential intellectual limit and the curriculum should be eminently practical with emphasis on the manual although academic work should be given according to the child s capacity, fourth or fifth grade level usually is the limit Competition with normal children must be carefully excluded Not only does it impose an unfair handicap on the normal child but it is particularly harmful for the defective since it discourages effort, may produce various abnormal behavior reactions, and if the level of the feebleminded child is reasonably high, competition only serves to emphasize the gap which exists between it and normal children The resultant feelings of inferiority are destructive While institutions cannot solve the problem of mental defect by permanent segregation, yet they occupy an important place in the treatment plan as centres of instruction and training It is usually necessary to remove the defective child from the home circle for a time not only for the purpose of training but because of the harmful psychological effect on normal siblings Naturally a certain segment of mental defectives, including those who are very low on the intelligence scale the very badly physically handicapped those who have dangerous criminal tendencies and the psychotic must be permanently segregated in suitable institutions

Paranoia and the Paranoid Reaction Types

The grave implications of a diagnosis of paranoia and the inherent dangers in a fixed persecutory delusional state make it imperative for the practitioner to give some consideration to its early diagnosis and the management of the incipient phases of the disorder Paranoia in its fully developed psychotic stage is a chronic systematized fixed delusional state of gradual development and due exclusively to internal causes (for further discussion of paranoia see Vol VII Chapt VII) It is not accompanied by hallucinations and is characterized by the preservation of clear and orderly thinking The prognosis is of course unfavorable once the process has progressed to the psychotic level Kraft Ebing defines the disease as a chronic mental disorder occurring exclusively in tainted individuals frequently developing out of the constitutional neuroses and having as its principal symptom delusions With this singularly unfavorable prognostic implication in mind it becomes increasingly important to give careful consideration to the recognition of the earliest psychological potentials of the condition and to the remedial measures available for the eradication of such unwholesome potentials

The term paranoid means like or resembling paranoia and refers *chiefly to those aspects of mental disorders having to do with delusions* of persecution While the outlook for true paranoia is not favorable yet paranoid reactions are observed in many recoverable types of mental illness In evaluating the significance and depth of early paranoid trends we must bear in mind that paranoid beliefs occur in alcoholic psychosis senile toxic, schizophrenic and involutional mental disorders In formulating an early diagnostic impression the physician will be aided by a careful personal history and an evaluation of the life long personality trends of the individual

Early Personality Traits of Paranoia

There will be revealed in a carefully taken personal history of the patient certain traits recognizable as abnormal in early youth There are usually *many varieties of personal peculiarities Those most characteristic of the* paranoid constitution are seclusiveness a tendency to see a biased meaning in things mild distrust of playmates and withdrawing tendencies These persons are always wondering what others think and attribute deliberate intentions to the indifferent actions of others Be-

opportunities for specific therapy In a few of the endocrine situations like cretinism and, now and then in some of the sensory deprivation states brilliant therapeutic results are obtained, in the one instance by thyroid, in the other by expert training and teaching If there is congenital syphilis, it should be treated vigorously Birth trauma or head trauma later in life needs the benefit of expert neuro-surgical opinion Orthopedic surgery is very helpful in many paralytic cases

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because he had to "have it out" with one of his associates or he would flatly refuse to carry on until one of his associates was dismissed for an imagined personal slight etc The personality trends in this early case of paranoid reaction are quite readily recognized as merely exaggerations of some of those traits we all possess and which could hardly be regarded as psychotic Most normal individuals are likely to think that his merits are unrecognized to blame his environment for what are really dissatisfactions with self Real or imagined injuries to pride tend to result in feelings of resentment or bitterness of variable duration We all tend to project our shortcomings and to rationalize our weaknesses In paranoid reactions there is a marked exaggeration of the mechanism of projection, of the tendency to repudiate aspects of the personality that do not measure up to the standards the individual has set for himself and the attempt to obtain a sense of security through compensatory strivings The *underlying factors in the genesis of paranoid reactions* are to be found in the hypersensitiveness the need for protecting vulnerable aspects of the personality in the craving for lofty unattainable goals in the deeply hidden unconscious drives which are denied expression by the action of powerful repressive forces

It seems to be generally accepted that a large unconscious factor in the genesis of paranoid reactions is to be found in a repressed homosexual drive Freud believes that repression of the homosexual impulse is in the potential paranoid only partially successful and because of threatened failure of the repressing forces the whole of the homosexual constellation *is projected upon others* The paranoid tries to prove that the trouble homosexual fixation is not within himself by projecting the whole problem As the inability of the individual to remain successfully integrated progresses more obvious symptoms of personality difficulty appear Jealousies selfishness excessive vanity unreasonable ambitions develop and dreamy impractical goals are set Irritability appears and the ability to concentrate on any given task is impaired

Early Symptoms of Paranoid Psychosis

The transitional phase from personality predispositions and unwholesome traits still within the limits of normal into the earliest manifestations of psychotic behavior is exceedingly difficult to comprehend For a long time the conduct on the surface is not disturbed but inwardly there is an increasing rigidity of thought a loss of flexibility and lack

havior is, in general quite above reproach, there is a correctness about the conduct which is entirely praiseworthy Casual observers might characterize such individuals as possessing high ideals, strict codes of ethics and morality There is however an unwholesomeness to be found in the excessive pride marked sensitiveness to criticism, longings for lofty goals, the firm conviction of having been born for something special The physician rarely sees persons of this type except as the personality can be indirectly observed in the medical care of some somatic ailment Observed in this fashion the practitioner will be struck by the ready misinterpretation of statements the tendency of the patient to feel a personal slight or 'hurt", where no such thing was intended The point of view on life is somewhat warped by the feelings of unfairness of fellow workers or supervisors by a twisted life philosophy which is defensive and based on the fundamental belief that life is tricky and one must have his wits about him to defend himself against unfairness and harmful criticism Things are always going against" them, others have all the luck, the successes of others were all attained at the expense of the patient The mechanism of projection is seen as the underlying dynamic process by which the blame for the patient s failures and shortcomings is put upon others In a sense this technique is employed as a defense against recognition of his own deficiencies and faults In this way he denies his weaknesses and responsibilities To a degree projection is a normal mechanism but when it becomes the chief weapon of the individual for defense against recognizing his own personality deficiencies it is an abnormal trait and forms the most important psychological potential for the later development of paranoia

One of our patients who, in spite of intellectual brilliance and uncanny business acumen came to us after complete failure in industry related an endless number of incidents in which his superiors had "let him down", where he had always been assigned the most difficult projects which others had rejected where neglect on the part of others of their rightful duties had kept him from succeeding etc A talk with his superintendent revealed to us the fact that our patient was undeniably the most capable man in the entire organization but that no one could work with him because of his undesirable personality traits his readiness to feel slights his hypersensitiveness and resistance to helpful suggestion A project was begun in excellent order, the plans carefully laid, the successful conclusions clearly visualized but nothing was ever completed The patient was constantly having to delay advances in the work

Management of the Early Manifestations

In spite of the customarily unfavorable prognostic pronouncements it may be possible in the earliest stages of the disorder to bring about significant improvement if not complete personality readjustment in a fairly high percentage of cases Inasmuch as the life story of the paranoid reaction reveals predictive traits in early life corrective efforts should be directed at this most accessible period in life There is nothing in the historical data nor in psychiatric observations to prove the presence of a strong specific hereditary tendency in the disorder The modifiability of the so-called predictive paranoid traits therefore becomes a matter of parental guidance personal mental hygiene and environmental and educational therapy Those asocial traits of resentment selfishness jealousy withdrawal sulkiness peevishness and inability to fit harmoniously with others should be remedied by therapeutic management of parents the promotion of better understanding by teachers the fostering of wholesome social and recreational contacts through church groups boy and girl scouts community teams and the like All phases of illness and convalescence should be managed with caution and the all too common tendency for the establishment of a complaining alibi attitude is to be strenuously resisted Help with sexual problems particularly at the age of adolescence and the promotion of wholesome play relationships with children of both sexes will do much to break up unhealthy emotional attachments with persons of the same sex Personal discussion with the patient with a frank and complete understanding of his problem will open the way to the construction of confidence and a healthy therapeutic relationship

The established case of paranoia has for many years been regarded as a hopeless mental disease resistive to all forms of treatment and potentially dangerous to attempt to manage Recently however with an increasingly deeper and more satisfactory understanding of the underlying factors at work in the early stages of the disorder some hope of psychological readjustment has been expressed Preventive measures will have to be begun in childhood and the attack directed at the faulty personality construction Psychoanalysis has been suggested and successes occasionally are reported even after the development of psychotic symptoms The physician must remember at all times that the paranoiac is essentially dangerous To evaluate correctly the degree of danger in

of capacity to form correct judgments concerning environmental happenings The physician may be assisted to a clearer recognition of the incipient psychotic symptoms by Meyer s conception of the gradations in the evolution of the paranoid reaction

(*a*) Uneasy, brooding, sensitive type with an inability to correct notions and to make concessions
(*b*) Appearance of dominant notions suspicious or unbalanced aims
(*c*) False interpretations with self reference and a tendency to sys tematization without and within
(*d*) Retrospection or hallucinatory falsifications
(*e*) Megalomaniac developments or deterioration or intercurrent acute episodes
(*f*) At any period anti social and dangerous reactions may result from the lack of adaptability and excessive assertion of the aberrant personality

Particularly in the stage of incipiency can the elements of conflict be recognized This phase of onset has been designated as the hypochon driacal stage of subjective analysis The patient becomes increasingly self centered, may feel worried and perplexed is unable to concentrate complains of headache or drowsiness He begins to feel that the remarks he overhears the things he sees the newspapers he reads all have some special significance and relate directly to him (ideas of reference) This stage of worry and morbid introspection (stage of conflict) gradually passes into a second stage during which suspicions and delusions of persecution become fixed (psychotic stage) He begins to believe that all the things he saw and heard were really part of a plot to ruin him Delusions of persecution of infidelity and of a grandiose nature now become predominant

It is important for the physician who sees the paranoid reaction in its earliest manifestations to realize that not all cases go on to an illness of a psychotic degree Blueler believes that there are many paranoid types, who never become hospitalized or come under the care of psychiatrists because they recover before they have reached full psychotic development Certainly it should be possible by recognizing the paranoid personality potentials in early life to correct distorted thought processes and divert them into constructive wholesome channels

Paresis

In spite of the fact that paresis is a clear-cut psychiatric entity with a distinctive pathology and diagnostically decisive serological findings there are frequent and sometimes almost unbelievable failures to make a reasonably early diagnosis Such mistakes usually are costly For one thing now that newer and rather satisfactory methods of treatment have been developed the patient is denied the only opportunity for improvement and recovery Once the pathology has made definite inroads into the cyto architecture of the brain it is too late for treatment Again to miss the diagnosis in the early stages often means that in a few weeks the unsupervised patient will by his conduct destroy the reputation built up during his previous life extravagantly waste his substance and reduce his family to misery and degradation

*In a general way diagnostic error is apt to be due to the over*emphasis placed upon the mental symptoms of paresis There seems to be a current opinion that the presence of grandiose delusions signifies paresis Nothing could be farther from the truth Solomon and many other authorities have testified thoroughly to the protean character of the mental picture of paresis One of us in an annual clinic on this psychosis is able to present clinical material which closely simulates practically every psychosis and psychoneurosis so that the student without benefit of history serology or neurological findings is guilty of a ninety per cent diagnostic error For further discussion of this topic see Vol VI Chapt XXI and Vol VII Chapt XI

A few illustrative cases will readily show the fallacy of overweighting the early mental symptoms and the serious omission involved in the failure to examine the spinal fluid

Case 1 —N G male age 40 admitted to the Philadelphia General Hospital with a diagnosis of catatonic schizophrenia The history revealed that the patient suffered a psychotic episode in 1913 for which he was admitted to a private mental hospital remaining there for ten months He was transferred to a state hospital with a diagnosis of catatonic schizophrenia There were many evidences of bizarre hallucinations and delusions In 1916 after three years of continuous hospitalization he was discharged recovered In 1930 the patient became restless irritable uncooperative had visual and auditory hallucinations was irrelevant and incoherent in his speech and showed the phenomenon of echolalia He was admitted to the Philadelphia Hospital in August

any given case it is necessary to determine how completely the individual is permeated by his delusional beliefs and how directly they focus upon a single individual There is potential danger for that person upon whom the delusions center

It is important for the physician to realize also that there are basic and essential differences between paranoia and paranoid reaction types The former is an extremely rare psychosis the latter a common syndrome of mental symptoms which may occur in almost any psychosis In the early therapeutic attack on the paranoid personality a thorough study of the patient's life history is important to attain as complete an understanding of the patient as possible while at the same time winning his confidence to some extent Meyer emphasizes the necessity for painstaking study of the entire past history and advises that having prepared the ground in this way, the physician can proceed to explanation and persuasion with some hope of results sufficient to enable the patient to be a useful, if still not a normal member of society A critical attitude must be rigorously avoided The treatment possibilities of the paranoid psychoses have been greatly enhanced by the advent of insulin and electroshock therapy in addition the use of prefrontal lobotomy has been recommended for the more chronic cases Paranoid schizophrenia is one of the forms of schizophrenia more favorably modified with the use of insulin treatment In a general way the prognosis with insulin is dependent upon the duration of illness and prepsychotic personality the shorter the duration of illness and the better the prepsychotic personality the more likely a good result Bond and Shurley[6] report a 37 per cent recovery at the end of five years for a series of 309 schizophrenic patients treated over a ten year period

Electroshock has been very effective in involutional melancholia but the outlook is definitely less favorable in the paranoid type of involutional melancholia

Lobotomy has been used in paranoid schizophrenia paranoid involutional melancholia and paranoid conditions Freeman and Watts' report poor results in paranoid states The general treatment at the psychological level resolves itself into as complete as possible an unravelling of the tangled skein of the patient s mental life an uncovering of the activating circumstances in his career which have been etiological factors in the disorder and in so doing modify his mental trends by a progressive process of readjustments and reeducation

and facial muscles Blood and spinal fluid serology was positive and the gold curve read 5555432100 The patient was inoculated with tertian malaria and allowed to have twelve chills before termination by quinine At the end of ten weeks there was no improvement The depression was still pronounced and the patient refused to take food A second course of malaria with eight chills was given After this the patient did begin to gain Bismarsen was given for two months and the patient then became well enough to return home After five months of gradual progress she developed an acute mania lasting three months and then made a good adjustment The patient has remained well for five years and repeated Wassermann tests have always been negative

In the few instances recorded paresis simulated schizophrenia and both phases of manic depressive psychosis but the physician who wishes to diagnose paresis in its early stages must be ever on the alert There is no psychosis or psychoneurosis which may not be mimicked We have seen paresis mistakenly diagnosed traumatic psychosis when it followed on the heels of head injury Frequently we have seen the simple dementing form of paresis diagnosed or treated as senile and arteriosclerotic dementia because of the presenting memory failure other defect and psychic dilapidation In several instances paresis would have come to operation but for the insistence of the consultant that there be a serological study Alcoholism is fairly often one of the early symptoms of paresis and in this way the trap is baited for gross diagnostic mistakes In a group of paretics the onset may be marked by confusion and a delirious like reaction sometimes with hallucinosis thus paving the way for the tragedy of diagnosing a toxic psychosis with its favorable prognosis The first sign of paresis may be a convulsive seizure which sometimes leads to the wrong conclusion of cerebral hemorrhage or thrombus or epilepsy Juvenile paretics are from time to time admitted to institutions as mental defectives It has been thought that hysteria may have some association with syphilis The designation syphilitic hysteria should be discarded but nevertheless hysterical like manifestations may be witnessed in early paresis Neurasthenic symptoms are of the greatest importance in the diagnosis of the beginnings of general paresis It is possible that all cases of early paresis manifest neurasthenic symptoms in the form of vertigo headache many somatic complaints and sexual disturbances Stokes[1] believes that with the improved therapeutic outlook of general paresis the period of pre paretic neurasthenia becomes the ideal one for treatment Stokes too warns

193-, and the diagnosis of the catatonic excitement of schizophrenia was made Routine spinal fluid and blood serological examinations revealed a strongly positive spinal fluid Wassermann reaction with a colloidal gold curve of 5555543- Treatment was begun with tryparsamide and the iodides but no improvement was noted At the present time, three years after admission he is mentally deteriorated, con fused, incontinent constantly mutters to himself is inaccessible and shows many bizarre mannerisms and periods of catatonia The neuro logical signs are as follows increased patellar reflexes irregular, sluggish pupillary reaction and some general muscular wasting

Case 2 — A white male age 50, now employed regularly as a sales man, was first admitted to the Philadelphia General Hospital in 1903 at the age of 22, diagnosed dementia praecox After six months he was discharged A history obtained at the time of his admission revealed that he had contracted a chancre at the age of seventeen for which he was inadequately treated After his discharge from the hospital he remained well until his second admission in 1924 at the age of 43 In the interim he had worked steadily as a salesman had been moderately successful and had supported his family At the beginning of the second attack he was mildly manic and had euphoria and flight of ideas Neurological examination revealed sluggish pupils which were unequal hyperactive reflexes and a fine tremor of the fingers Blood Wassermann reaction was strongly positive spinal fluid Wassermann reaction also was strongly positive with a colloidal gold curve reading 5555431000 He improved under intensive treatment by tryparsamide and sulpharsphenamine After one hundred and eleven injections of tryparsamide he was given bismarsen In 1931 he had a mild hypomanic attack which increased until in two months there was marked flight of ideas increased motor activity, incoherent conversation etc At that time spinal fluid examination was negative The manic attack subsided he was discharged in October 1931 and treatment was continued with bismosal He has remained free of mental symptoms and has been regularly employed as a salesman

Case 3 — A woman age 36 was admitted to the Pennsylvania Hospital in 1929 profoundly depressed and retarded with self-accusation and suicidal impulses The history indicated that the patient had contracted syphilis in 1918 and had been treated with arsphenamine At the time of admission the pupils were irregular, unequal and fixed to light The speech was slurring and there were slight tremors of the tongue

activity and one upon which depends the attitude of the whole individual in the face of actual situations. In a general sense, although the mental symptoms may seem out of harmony with the previous personality of the individual, there is much reason to believe that the pre-paretic personality traits are responsible for the lack of a characteristic mental picture in the disease. In other words, if a strongly introverted, schizoid type of personality is attacked by paresis, it is quite conceivable that the early manifestations of the infection will follow a schizophrenic pattern. On the other hand, a cyclothymic personality may suffer exaggeration of the cyclothymic trends and there may be a manic-depressive reaction. Sometimes the patient may have insight to the extent that he is aware of some impairment of mental faculties. The complaints in such situations usually are that the intellectual acuity seems to have been dulled. There is restless irritability and inability to keep the mind on a given task. Mental fatigue and forgetfulness are common early symptoms.

The family often will complain that the patient's dress and personal fastidiousness have suffered, that his table manners have deteriorated, that his sense of propriety and morality have been dulled. His humor and attempts at wit may be colored by unusual profanity and obscenity. Total abstainers frequently turn to alcohol. There may be mild mental confusion leading to disorientation. Soon the partial insight disappears or it may never be present and the mood may be one of well-being and complacency, resenting criticism and evading any attempt to procure thoughtful self-evaluation. Where grandiosity is the primary symptom the euphoric state is pronounced. The patient is very self-important, undertakes extensive business developments and expansion, may make foolish purchases and undertake financial obligations which he cannot possibly meet. On the other hand, there may be mild depression with feelings of inadequacy and personal failure. Unquestionably there is some impairment of physical efficiency and the patient's capacity for work is actually diminished. Not uncommonly the feelings of inadequacy amount to frank depression and despondency. In this type of reaction there may be mental retardation to a marked degree and responsiveness is lost. Bunker[3] in a careful analysis of 74 male paretics found that irritability was the earliest mental phenomenon. Next in frequency rank bradyphrenia (slowness), change of character and disposition, loss of weight, forgetfulness, hypersomnia, speech defect in

of the importance of early lumbar puncture in this neurasthenic prodromal stage. True cerebral neurasthenia in syphilis is often the consequence of psychic shock and anxiety and must be carefully differentiated from the onset of true neuro-syphilitic symptoms."

According to Kraepelin the sudden occurrence of neurasthenia in a person of middle age without apparent precipitating factors is always sufficient grounds for the suspicion of early paresis to warrant prompt investigation. One of us saw a patient in 19 , whose only complaint was that he was unable to concentrate as well as formerly in his studies. He was a college student who had contracted a chancre twenty months previously and had received adequate arsenical treatment. A spinal fluid examination showed a weakly positive Wassermann reaction and a paretic gold curve. Slight tremors, evident only under nervous stress, were the only neurological symptoms.

Migraine headaches may be an early symptom of paresis, and in the absence of a family history of migraine with a positive syphilis history a suspicion of paresis is well founded.

Early Mental Symptoms of Paresis

With the reservation clearly in mind that the mental symptoms alone constitute dangerously insufficient criteria, then one may examine with a certain amount of caution the early mental symptoms. They are difficult to evaluate unless one keeps in mind the fact that they constitute the response of the personality of the individual to a toxic assault on the central nervous system. The onset often is insidious and may take the form of inexplicable inappropriate behavior. The finer ethical and moral judgments seem to be impaired first. The patient himself seems to lack insight into his errors of judgment and in consequence may become involved in many unfortunate experiences. There is some impairment of comprehension, mild mental confusion, and the æsthetic feelings are degraded.

Campbell summarizes the early characteristics of the disease as follows: "The change in the personality, which at later stages becomes obliterated by grosser disorders, is first shown in a loss of that special responsiveness which distinguishes the individual as a social unit. The responsiveness to ethical, æsthetic, intellectual and certain conventional standards is involved; the patient no longer shows the same judgment, the same sense of values, a function different from mere intellectual

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import The danger to the patient is roughly proportional to the intensity of the spinal fluid changes On the other hand a negative spinal fluid in early or late syphilis is a fair guarantee of safety for the future as far as the development of neuro syphilis is concerned Schmidt[1] in an examination of 310 patients concluded that a negative spinal fluid is one of the best possible assurances for future freedom from syphilitic involvement Stokes urges the early examination of the spinal fluid and states that an early negative fluid is not necessarily an absolute assurance for the future, especially within the first year or two of the infection

A typical paretic fluid reveals a strongly positive Wassermann reaction a pleocytosis of moderate degree and a steppage gold curve In a general way the cell count is an index of meningeal irritation the intensity of the spinal fluid Wassermann reaction is a guide to the degree of parenchymatous involvement the globulin tests have little diagnostic import and the colloidal gold tests are mainly significant in prognosis Repetition is required for accuracy

Treatment

The Early Treatment of Paresis — Paresis like other manifestations of late neuro syphilis probably can be prevented by the adequate treatment of the early stages of the syphilitic infection For the appropriate treatment of early syphilis the student is referred to standard texts It is described also in Oxford Medicine Vol V Chapt XXVIII V Treatment should be instituted at the earliest possible moment The earlier treatment is begun the greater the likelihood of reversing the spinal fluid reactions should they become positive later in the disease

General Management — A careful medical examination of the patient before treatment is instituted is of the greatest importance This is especially true in the early stages of neuro-syphilis Dental infection should be cleared up The cardio vascular renal system should be carefully checked and the eyegrounds examined Ophthalmologists can readily detect the beginnings of primary optic atrophy and other damage done by the disease and this is of particular significance in deciding whether tryparsamide may be counted among the eligible procedures Many authorities feel that medical discipline cooperation and rational psychotherapy are valuable Stokes expresses it as follows Helping the patient with the personal problem consists first in determined re

somnia, judgment defect fatigability digestive disturbance, impairment of vision, headache rheumatoid pains

While these are some of the common early manifestations the multiform mental reactions are so varied that it is impossible to describe them all Delusions of persecution visual and auditory hallucinations catatonic attitudes and postures and a wide variety of psychoneurotic symptoms may all appear Pre paretic neurasthenia manifests itself in nervous discomfort, difficulty in thinking irritability disturbances of sleep pressure in the head and various and changeable discomforts and pains

Early Physical and Neurological Signs and Symptoms

From the standpoint of the chances of prompt diagnostic accuracy the early physical and neurological signs and symptoms stand halfway between the serological findings and the mental picture Some of the earliest manifestations possibly relating to underlying organic nervous system involvement, are headache vertigo nausea, transient aphasias tremors of the fingers lips and face slight dysarthria and paresthesias There may be flattening of the naso labial folds giving the face a relaxed flabby look One of the early pupillary signs is absence of the psychic response and quite early there may be irregularities and inequalities with sluggishness or even total absence of the light reflex The speech may be slurring and should be tested by such test phrases as 'methodist episcopal' 'Massachusetts artillery brigade', 'particular popularity', etc The changes in writing usually are dependent upon the degree of neurological involvement The tremor creates an irregular tremulous line but in addition the spelling may be distorted, and words and syllables are left out or transposed There may be absence of physical and neurological signs

Early Serological Findings

Contrasted to the uncertainty of the mental symptoms and the only relative reliability of the neurological signs the serological findings are so diagnostically positive and conclusive that in every doubtful case the spinal fluid should be routinely examined The presence of an abnormal spinal fluid in patients with early or late syphilis who show no objective neurological or psychic abnormalities is generally of grave prognostic

malaria or tryparsamide Stokes and Shaffer[1] found the result good in 1 8 per cent poor in 98 . per cent Hopkins[3] in 1933 on the basis of 1 00 cases concluded as follows (1) Early neurosyphilis is best treated by intensive routine measures with arsphenamine (2) Malaria is much the best treatment for paresis and tabo paresis (3) In diffuse late neurosyphilis tryparsamide and intra dural therapy are about equally effective and both much more so than routine treatment

In regard to the clearing of the blood and spinal fluid in successfully treated neurosyphilis Stokes[3] writes Practically all observers are agreed that while striking remissions and even clinical cure as determined by economic rehabilitation criteria may take place in the first year of paresis under treatment the reduction of the serological tests to normal requires from two to five years The response to treatment should be looked for in the spinal fluid about every six months A persistently positive Wassermann reaction in the spinal fluid as in the blood suggests a resistant case and should not be lightly dismissed While colloidal reactions tend to subside toward normality as the patient improves, and a first zone test may change to a second zone and finally become negative entirely the margin of technical error is large enough to require repetition to confirm any particular finding The patient who has a low cell count and a first zone colloidal test with strongly positive blood and spinal fluid Wassermann reactions has the poorest outlook therapeutically

Therapy — Tryparsamide is effective in neuro syphilis and conspicuously so in early and active paresis It should be given in doses of 3 gms dissolved in 5 to 10 c c of water The total amount of the drug given in successful clinical and serological results varies between 70 and 1 0 injections The complication of optic nerve disease has been extensively studied For the prevention of damage to the optic tract great emphasis should be placed on subjective symptoms as a guide to the cessation of treatment Stokes summarizes the results of tryparsamide therapy in paresis in 461 cases as follows

Complete remission	34 5%
Partial remission	[illegible]
Worse or stationary	7 %
Deaths	5 %

Tryparsamide is used in place of malaria in cases which refuse fever treatment during and after fever treatment and in early cases Bismuth

assurance wherever such is even faintly justifiable The response of the neuro-syphilitic to reassurance sometimes surpasses the effect of anti specific medication, if it comes from a trusted and experienced source and as a result of full consideration of the case Neuro syphilis often comes as a complete surprise so that adjustment of family relationships and the informing of the marital partner are essential to clearing the way for really effective treatment

Specific Treatment — There is considerable controversy centering around the use of arsenicals in primary and secondary syphilis, as to whether or not they induce a neurotropism and predispose the patient to the later development of neuro syphilis Recent reviews of the question of incidence indicate that in this country the occurrence of paresis is stationary or slightly on the decrease and that the mortality is definitely decreasing, which would not seem to be the case if arsphenamine were stimulating the development of neuro syphilis Weatherby in a study of [illegible]80 cases did not find evidence that arsphenamine given in the early stages of syphilis predisposed to the development of paresis He noted a tendency to earlier onset of cerebro spinal syphilis which might, however in his opinion, have passed unrecognized in inadequately treated cases O Leary and Rogin[6] examined the records of 500 cases of neuro syphilis entering the Mayo Clinic and found that in 7[illegible] per cent there had been no previous treatment 1[illegible] per cent had had desultory treatment with arsenicals, 12 per cent had been inadequately treated with arsphenamine and mercury There is nevertheless, a rather firm and widespread opinion among neurologists that treatment by the arsenicals has not lessened the incidence of paresis and that neural involvement appears earlier than formerly Perhaps it is the insufficient and inadequate use of the arsenicals that is dangerous and it is a fair conclusion that the way is paved for paresis by an inadequate display of the arsenicals

There are two forms of treatment for paresis (1) drugs and (2) artificial fever Tryparsamide and penicillin are the drugs of choice, while fever may be induced by cabinets malaria or typhoid vaccine injections

Alpers[11] states that "Each case must be handled on its individual merits General principles of treatment can apply only within broad limits It is best to treat the clinical problem as a whole rather than to treat only the serology

Results of Treatment — In 57 cases of paresis treated without either

Complete remission	39 1 %
Partial remission	18 %
Worse or stationary	8 1 %
Deaths	1 7 %

Serological Effect of Malarial Therapy — Stokes states It is evident that while a return to serological normality may be expected in a rather large proportion of malarially treated patients serological normality is neither a prompt a necessary nor a significant concomitant of clinical improvement

Electrical Methods of Inducing Fever — The electrical methods are still in the experimental stage Since it is practically certain that fever therapy in paresis is dependent on much more than the high temperature alone it is doubtful if they will replace malaria or other inoculations

We have little hesitancy *in advising malarial treatment in early paresis* provided no contra indications exist The malarial therapy should be followed by vigorous anti syphilitic treatment excluding arsphenamine (For details of treatment contra indications etc consult Clinical Psychiatry , Fourth Edition Strecker and Ebaugh P Blakiston s Son Co , Phila , 1935)

Traumatic Character Change

The whole more or less confused clinical conception of traumatic neurosis and traumatic psychosis probably will be somewhat clarified if the physician will recognize several significant facts First traumatic character change may occur as a result of trauma to any part of the body Its development is not necessarily dependent on specific brain injury Second psychological factors inherent personality weaknesses and neurotic predisposition always complicate the symptomatology whether the primary trauma is directly to the cranial contents or elsewhere Third in instances of actual trauma to the brain with concussion phenomena and resulting organic disarrangement objective neurological signs may be entirely absent Inability to demonstrate their presence is in no way acceptable proof that damage to the intracranial structures has not occurred Fourth it is possible for widespread cerebral damage to be inflicted by trauma to the skull without the loss of consciousness

In the case of severe trauma to the brain there are mental phenomena of the organic type with disturbances of consciousness delirium multi

and mercury may be given with it in appropriate forms and with the same cautiousness concerning toxicity

The use of *penicillin* is being investigated extensively, although the time necessary for final evaluation has not elapsed as yet The dosage recommended varies from 1,[illegible]00 000 units to 9 000,000 with most investigators recommending about [illegible] 000 000 units given in doses of [illegible]5,000 to 50 000 units every three hours Dittner[1] reported on the treatment of neurosyphilis with penicillin alone in 11[illegible] patients followed for 6 months or more "When given in adequate doses penicillin has proved to be at least as effective in the treatment of neurosyphilis as the combined fever and specific therapies

Rose and Solomon[13] in evaluating the combined penicillin-fever therapy of 100 cases of paresis followed for a year or longer, concluded that the results obtained are comparable with the older methods and that, if they withstood the test of time considerable progress will have been made in the treatment of late neurosyphilis

Heat cabinets for the elevation of temperature are preferred by many because of the more adequate control of temperature without much risk The results are reported to be about the same as with malaria Typhoid paratyphoid vaccine is used in patients who cannot tolerate the hypertherm machine or malaria but the results are not as promising Good results have been reported in the use of electroshock therapy to combat the depression frequently seen in paresis

Malarial Therapy — Stokes[9] states General paresis early and late including the field of paresis sine paresi is ideal and the chief field for malarial inoculation therapy The possibility of the malarial treatment of early syphilis before the development of any manifestation of paresis or other forms of neuro syphilis has been given considerable time and thought The conclusion reached from a careful review of all available data seems to be that there is no justification for malarial inoculation early in the course of syphilis with the hope of obviating the later development of neuro-syphilitic syndromes It is especially not to be thought of as a substitute for thoroughgoing treatment with arsphenamine bismuth and mercury Its primary and established field of usefulness is paresis and pre paresis

Results of Malarial Therapy — Stokes summarizes the results of malarial therapy in paresis as follows

injury is placed should anticipate the development of mental aberrations at some time or other in the immediate post traumatic state or in the convalescence period Some of the early manifestations of gradual deterioration are neglect of personal hygiene and inattention to matters of tidiness clothing etc The most frequent complaints of relatives are He is a changed man We cannot understand his stubbornness and meanness He is not at all like the kind and patient man he used to be Headache vertigo and insomnia are some of the early physical complaints

Recognition of the early manifestations of traumatic sequelae are of interest especially in children In these cases there are early in the course of the disorder marked changes in general behavior impulsiveness aggressiveness peevish irritability and inability to fit into accustomed school and social relationships Not uncommonly the consequences of traumatic brain damage in children are characterized by behavior disorders similar to those appearing after encephalitis The adult patient often complains of sensations of pressure becomes cautious in his gait develops marked vertigo and rush of blood to the head on stooping and sudden changes in position During the attacks of headache the patient tends to become intolerant of the company of other people The various objective sensations are aggravated by heat and the patient wishes to spend most of his time out of doors The susceptibility to alcoholism is a marked early symptom and often the ingestion of small quantities produces violent behavior and the precipitation of psychotic episodes Strauss and Savitsky believe that clinically the organic sequelae of head injury should be differentiated from the terror and anxiety reactions following threat to bodily integrity The term traumatic neuroses may be confined to the latter type of reaction In their opinion the objective post traumatic syndrome characterized by headache dizziness inordinate fatigue on effort intolerance to intoxicants and vasomotor instability is organic and is dependent on disturbances in intracranial equilibrium due directly to the blow on the head They suggest the term post concussion syndrome for this symptom complex

Not in every instance of *traumatic neurosis* is it the physical trauma such as railroad accident or the concussion which produces the neurosis It is rather the mental accompaniments such as fright anxiety and the like and the psychic interaction which results from the trauma and the important questions this interaction opens up such as worry con

form delusions and hallucinations The end result in certain cases is the formation of the so called 'traumatic constitution' In the case of trauma affecting chiefly the emotional life of the patient usually there is the sequel of psychoneuroses or the 'post traumatic' neuroses The medico legal aspects and the rapid increase in the incidence of head trauma and its consequences make an understanding of the early manifestations of traumatic mental change of great significance Pure traumatic psychosis is a relative rarity in psychiatric experience, for there is scarcely a case in which heredity alcoholism syphilis psychopathic traits contemporary worries and in fact one or the other of most of the usual predisposing causes of mental disorder are not found The now classical paper of Meyer[1] can be accepted as the best clinical subdivision of the traumatic psychoses

Electroencephalographic changes following head injury are found to parallel closely the clinical condition of the patient and the degree of injury of the brain With concussion there is generally a diminution or cessation of the electrical activity while clinical improvement will show a disappearance of the abnormalities In very severe cases electroencephalographic changes may be found years later Attempts to correlate the persistence of abnormal electroencephalographic changes and post traumatic states of possible psychogenic origin have not been conclusive

Early Manifestations of Traumatic Character Change

In the early development of post traumatic constitution there occurs a general personality change in which the patient becomes less conscientious and shows a diminishing appreciation of moral responsibility Thinking is slow, the mind is easily fatigued work capacity is small concentration and memory are poor There is usually depression and realization of the impairment of psychic functions The patient prefers to keep away from all forms of amusement as well as work and seeks a quiet secluded existence The post traumatic constitution is further characterized by the susceptibility to alcoholism and other forms of toxemia by lasting vasomotor instability with accompanying symptoms of headache cerebral congestion bursting sensations in the skull etc There are sudden outbursts of temper irascibility is marked and there may be hysterical or epileptiform episodes and occasionally paranoid symptoms The physician under whose care an acute traumatic head

injury is placed should anticipate the development of mental aberrations at some time or other in the immediate post traumatic state or in the convalescence period Some of the early manifestations of gradual deterioration are neglect of personal hygiene and inattention to matters of tidiness clothing etc The most frequent complaints of relatives are He is a changed man We cannot understand his stubbornness and meanness He is not at all like the kind and patient man he used to be Headache vertigo and insomnia are some of the early physical complaints

Recognition of the early manifestations of traumatic sequelae are of interest especially in children In these cases there are early in the course of the disorder marked changes in general behavior impulsiveness aggressiveness peevish irritability and inability to fit into accustomed school and social relationships Not uncommonly the consequences of traumatic brain damage in children are characterized by behavior disorders similar to those appearing after encephalitis The adult patient often complains of sensations of pressure becomes cautious in his gait develops marked vertigo and rush of blood to the head on stooping and sudden changes in position During the attacks of headache the patient tends to become intolerant of the company of other people The various objective sensations are aggravated by heat and the patient wishes to spend most of his time out of doors The susceptibility to alcoholism is a marked early symptom and often the ingestion of small quantities produces violent behavior and the precipitation of psychotic episodes Strauss and Savitsky believe that clinically the organic sequelae of head injury should be differentiated from the terror and anxiety reactions following threat to bodily integrity The term traumatic neuroses may be confined to the latter type of reaction In their opinion the objective post traumatic syndrome characterized by headache dizziness inordinate fatigue on effort intolerance to intoxicants and vasomotor instability is organic and is dependent on disturbances in intracranial equilibrium due directly to the blow on the head They suggest the term post concussion syndrome for this symptom complex

Not in every instance of *traumatic neurosis* is it the physical trauma such as railroad accident or the concussion which produces the neurosis It is rather the mental accompaniments such as fright anxiety and the like and the psychic interaction which results from the trauma and the important questions this interaction opens up such as worry con

cerning further work capacity, fear of repetition of the accident, the human desire for damages and, in short, the fear of being handicapped and exposed to the vicissitudes and hazards of the battle of life Such a belief does not deny the existence of actual organic concussion, but it merely restricts the number of cases in which there is true pathology It is not always possible to say with exactitude whether the symptoms arise on an organic or functional basis, and it is not unlikely that there may be transitional cases which participate in the nature of both

The earliest symptoms of traumatic neuroses often are typically hysterical or neurasthenic True motor irritation symptoms occur, such as tremor or myoclonus paralysis of the arms or legs or of functions such as walking or standing Sensory failures such as anesthesia are quite common Probably the tendency toward simulation is greater in traumatic hysteria than in non traumatic It is difficult for the physician particularly in the early course of the disorder, to be sure how large the functional elements may be but it is certainly true that the condition of the patient under examination is very different than it is when he is unobserved However this does not itself exclude an unconscious mechanism In malingering the symptoms are voluntary deliberate and consciously produced with a gainful objective in mind In traumatic hysteria the symptoms are the result of psychopathological mechanisms largely beyond the awareness of the patient

Treatment of the Early Symptoms of Traumatic Character Change

The convalescent phase of acute head trauma is of great importance, particularly in children Rest even after a minor concussion, should be prolonged and return to active life should be gradual The physician should realize that his attitude when he sees a patient who has recently suffered from trauma or accident, may determine the development of a neurosis For instance, to say to a patient who is suffering from an insignificant laceration of the back that if it had been a little nearer the middle he would have been paralyzed' simply means that the seed of suggestion for the development of a neurosis has been planted Such a remark was made by a hospital interne as he was dressing a minor laceration of the back about two inches to the left of the thoracic spine in a young negro laborer perfectly developed muscularly and enormously strong Three days later the man returned to the dispensary bent over almost double and groaning with pain localized in the thoracic spine

He was 'cured' by suggestion reinforced with high frequency and electrical current

Frankness is advisable and the patient should be told positively and without qualification about when his injury should recover If the question of compensation complicates the treatment of the patient the physician should attempt to have it adjusted in a just way as soon as possible Delay is unwise creating a period of uncertainty on the basis of which a neurosis may come to the surface It is unquestionably true that the numerous examinations which are made by various medical representatives prejudice the patient's treatment and recovery With his mind already prepared for a neurosis the repeated examinations and disagreements have an unsatisfactory and unhappy effect

The ideal time to begin the treatment of a traumatic neurosis is as soon as the patient begins to emerge from the twilight zone of his acute traumatic experience For then the neurosis is still taking shape in the mind of the patient and it is very malleable under the tool of suggestion In each instance the traumatic episode the concussion or actual injury whatever it may be may provide a method of escape from an unpleasant and perhaps an intolerable situation in life and open up to the unconscious mind new and desirable vistas

Too often the traumatic neurotic comes under the care of a physician who makes no attempt to manage the environment and the patient is often at the mercy of sympathetic but misguided relatives who unwittingly exaggerate the injury Furthermore our cumbersome legal system permits dishonesty A certain species of lawyer often of ill repute fosters in the mind of the patient the belief that he is entitled to large compensations because of his serious and permanently disabling injury There is a tendency which the physician will have to guard against at an early date for the patient to capitalize on the accident and insure for himself ease and comfort If it is at all possible the patient should be spared the farce of a suit which a jury decides not on an intellectual but on an emotional basis There is an almost uncontrollable tendency to dramatize the evidence and thus impress upon the patient by emotional appeal and oratory false gravity and permanence of his situation

The medical treatment of traumatic mental changes is limited to general hygienic measures adequate rest freedom from fatiguing occupations long hours of sleep and a nutritious diet containing generous allowances of minerals and vitamines Light sedatives in the form of

the least toxic barbiturates can be employed to minimize nervous tension and apprehensive emotional outbursts of the patient. It is probable that a mild degree of fluid limitation tends also to minimize the cerebral symptoms and sensations of pressure and headache which so commonly occur. Psychotherapeutic endeavors should be broadly employed in the form of suggestion, reassurance, elimination of emotional handicaps uncovered in the personality, and the promotion of serenity of mind and freedom from stress in the environment.

Epileptic Mental Deterioration

Epilepsy, by which is understood idiopathic epilepsy, is a disease which was well known to antiquity. It in itself does not constitute a mental disorder. Yet though every epileptic does not become definitely mentally sick, he scarcely can be considered emotionally or mentally normal. Failure of the physician to make an early diagnosis and neglect of prompt and appropriate medical, psychological and environmental treatment in the earliest manifestations of the disorder may result in progressive emotional and intellectual deterioration and the ultimate development of epileptic constitution.

The greatest incidence of epilepsy occurs in early life before the age of 15 years, and the physician must be exhaustive in his search for possible causative or aggravating factors related to infections, toxic, dietary, syphilitic, organic neurological and endocrine pathology common to childhood. The formerly accepted hereditary influence has not been too much respected in recent times. Myerson believes that epilepsy is essentially "an affair of the individual and not of the stock."

The studies on epileptics with the electroencephalogram have been most helpful in the diagnosis and management of this important disorder. As a consequence of these studies, Gibbs[6] has termed epilepsy "a paroxysmal cerebral dysrhythmia ... a disordered functioning of the rate regulating mechanism of the brain." Grand mal epilepsy is characterized by extreme acceleration of the electrical activity of the cortex, psychomotor attacks by extreme slowing of this activity, and petit mal, by alternation of fast and slow activity.

In certain of the psychoanalytic writings epilepsy has been considered a psychic disorder. Jelliffe and White believe that there are epileptoid types conditioned by psychological situations. They regard the progressive nature of the deteriorating process as a retreat further

and further away from reality and believe that the revival of earlier ways of finding pleasure results in profound regression. Each attack they believe is a concession to the cruder self and enriches the egotistic interests so that the disease is progressive in character and tends toward dementia in the sense of a degradation of interests and capacities for adequate social contacts.

It is possibly true that the psychic make up of the individual plays an important part in the manifestation of symptoms but as the etiological agent the theory of pure psychogenic origin is not widely accepted. In cases in which early sexual trauma, severe fright and long periods of worry and anxiety apparently have precipitated its appearance there is considerable doubt as to the presence of genuine epilepsy.

Hysteria can and does frequently simulate major epilepsy and proves to be in many instances difficult to differentiate from petit mal attacks. There are however sufficient differential signs to make the diagnosis clear.

If the treatment is to be successful and if the tragic sequelae of personality disintegration and dementia are to be avoided the problem must be attacked in its earliest incipiency. While the disease in its convulsive manifestation is not strictly within the limits of psychiatry, the mental reactions are nevertheless of great significance for the psychiatrist.

The Early Manifestations of Deterioration

The earliest manifestations of damage to the personality are to be found in the form of emotional instability, moodiness, inflexibility, irritability, selfconsciousness, impulsiveness and undue aggressiveness. There is a tendency to over ride finer social and moral codes and violate more rigid ethical concepts of honesty, sincerity and truthfulness. Jelliffe and White[1] describe the periodic moroseness as "touch me not" moods. Other later personality characteristics of epileptics consist of egotism, conceit, hypochondriasis, a sickly sentimentality in religion, inadaptability to environment, cruelty, laziness, irascibility, excessive sexual urges, criminal tendencies and violent impulses. Clark finds mood defects, egocentricity, abnormal sensitiveness and inability to meet the usual life situations. He believes that these personality changes are the results of the disease. The mental manifestations of more profound deterioration may consist of (1) periodical ill humor which may last from a few hours to several days, ( ) epileptic dream or twilight

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elimination of a causative endocrine deficiency Tetany for example may be mistaken for the beginning of epilepsy, and its response to therapy is almost immediate

Epilepsy generally is a grave and disabling illness but it is not necessarily a total handicap to the patient Historical records contain interesting notes as to the frequency with which it has appeared in the great characters of history Julius Caesar Napoleon the Duke of Wellington Peter the Great Charles the Fifth Mohammed the Apostle Paul have all been said to have been epileptic Byron Balzac and Dumas suffered from an epileptic taint Dostoevski is thought to have been a victim of this disease

Perhaps the most important step in the prevention of the disorder is to be found in a sensible application of the laws of eugenics Defective plasm should not be transmitted

Talbot[1] recognizes the significance of emotional and physical strain Epileptics cannot stand the wear and tear of great emotional stresses They should not be required to carry continuous burdensome responsibility but in avoiding this there should be no reason for complete withdrawal from life Many epileptics are capable of carrying on adequately in the world of business but the vocation should be subjected to the scrutiny of the physician The help of a vocational psychologist often will assist the physician to fit his patient into occupational situations for which he is best suited and thus avoid unnecessary stresses Ordinarily it may be said that those occupations which involve severe mental and physical strains or those which subject the individual to danger of physical injury must be strictly avoided Evaluations of mental capacity will help to adjust the individual to an occupational environment which does not throw too heavy a burden on limited intellectual equipment and thus serve to prevent the development of feelings of inadequacy and personal failure

Where regular gainful occupation cannot be permitted a careful choice of some hobby in the form of the arts and crafts or some out of door activity will be of great value Some of our patients have found freedom from competitive pressure and intellectual stress in truck gardening raising of flowers management of a greenhouse raising rabbits dogs etc Such wholesome activities will do much to remove the insidious atmosphere of watchfulness and fear which come inevitably to wear upon the patient's nerves Working with mechanical tools

states in which there is considerable confusion (3) delirious confusion with hallucinations and ecstatic delusions or anxiety (4) "a conscious delirium", in which the confusion is slight This has considerable medico legal import since crimes may be committed during the aimless journeys, which the patient takes and for which he is absolutely amnesic (5) epileptic deterioration in which the dementia may become very profound

There are many other less well-defined psychotic states which have been described Paranoid states are not uncommon and should be considered among the mental reactions occurring in epilepsy The personality deviations may be grouped under the convenient term *epileptic constitution*

Treatment of the Early Manifestations of "Epileptic Constitution"

While recovery is scarcely to be hoped for yet much may be done, especially in the earliest stages to ameliorate the patient's condition The personality should be studied carefully and painstaking reeducation should be instituted Occupation must be free of dangers to the patient and to others Modern treatment[3] of the convulsive state based on the understanding of the electrical conductivity of the brain cells, should of course be undertaken In the face of a definite psychotic reaction which is often a menace to the patient and to the community, a suitable institution is the only haven

The physician to whom a patient is first brought for relief of a convulsive disorder, must constantly bear in mind that convulsions may occur as manifestations of transient toxic states hysteria endocrine disorders intestinal parasites, dietary deficiencies and organic brain pathology Particularly in the early diagnostic studies should the attention be directed toward investigation of these possibilities Too hasty diagnosis of "classical epilepsy" may cause the patient and his family untold grief and anguish Juvenile paresis often shows as its first manifestation a major epileptiform seizure or petit mal attack The mental confusion and intellectual impairment of the paretic may be mistakenly regarded as epileptic deterioration It is estimated that not more than 2 per cent of all epilepsies are directly due to endocrine disorders but even such a low incidence makes detailed study of the endocrine aspects worth while It is occasionally true that dramatic recovery from a condition hastily diagnosed as progressive epileptic deterioration is produced by

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power driven saws and sharp instruments should, of course, be discouraged

Adequate physical and mental rest must be emphasized A secluded, quiet residence free from irritating noise and the confusion of traffic, should be sought The seashore or vacation spots in the mountains permit the individual great freedom and avoid the undesirable features of concentrated city life Wherever possible the patient should live for a time at least each year away from his family and close associates This will not only assist the patient but will also help the family to construct a new and more wholesome mental attitude free from the uncomfortable fear that the patient may develop a seizure at any moment Adult epileptics require a minimum of nine hours' sleep each night and there should be a rest period in the middle of the day of an hour or two In children the requirements are far greater

There is a mental hygiene as well as a physical hygiene in the treatment of epilepsy Talbot states The mental and emotional condition of an epileptic depends not only on the reaction of the individual toward the occurrence of seizures but also upon his attitude toward the people with whom he comes into frequent contact and the atmosphere created by these companions The importance of a thorough understanding of the emotional life of the patient deserves great emphasis for an entirely satisfactory course of treatment cannot be devised without recognition of all the sources of nervous fatigue Slight changes in environment occupation and human contacts may be far more effective treatments for certain epileptic conditions than the most elaborate impersonal measures The social stigma which the epileptic has to face, and from which he derives intense feelings of self-consciousness and anxiety in the presence of others represents a nervous problem ever present in the condition The epileptic will need support through understanding relatives and friends in his attempts to create as nearly normal life adjustment as possible There is no doubt that psychotherapy has its place in the treatment of the disorder Since he must understand how to meet the exigencies to which everyone is subject and in addition how to handle suitably the added difficulties imposed by the epileptic condition more training is necessary than for a healthy individual" (Talbot) Understanding reassurance assistance in overcoming smaller personal problems relief from worries and emotional reeducation are some of the significant ways in which the physician can help the victim of this disease Psychoanalysis as a therapeutic procedure in overcoming the

convulsive states is seriously to be questioned. However, assistance with deep seated emotional problems brought to light by psychoanalytic methods may be of considerable assistance in removing the hazards of anxiety, fear and strong unreasonable emotional reactions.

The medical treatment of epilepsy is dependent on the type of convulsive disorders. For grand mal, with the large slow waves on the electroencephalogram, the treatment of choice is dilantin (sodium diphenyl hydantoinate) 0.3 to 0.6 gm. three times a day, sufficient to control the seizures, supplemented if necessary by phenobarbital 0.06 to 0.1 gm. By reason of the medical treatment the results are more gratifying than at any time in the history of epilepsy. Other useful drugs are mebaral (prominal) in doses of 30 mgm. to 0.2 gm. three times a day and mesantoin 0.3 to 1.0 gm. daily.

For the first time a drug has been found to be effectual in controlling petit mal. Tridione[9] is the treatment of choice in petit mal whether *occurring alone or in conjunction with grand mal. The dosage is 1 to* 3 gm. a day without regard to age. Tridione has been found to be of help in the treatment of psychomotor equivalent states[10]. It may be used in conjunction with sodium dilantin for the treatment of combined states of grand mal and petit mal.

The ketogenic diet and fluid limitation regime are still of use in patients where drug therapy is inadequate for control. Electroshock therapy has been used also to control severe epileptic states. Surgery is confined to those cases where a specific cause, such as a cortical scar, is found.

The problem of educational training in children and young adults is a most difficult one. In general it is best, if the epilepsy is not too severe, for the patient to attend a regular school. There is always the hazard of the child becoming the butt of ridicule by his companions, and it is wise to discuss the entire problem with the principal of the school and the individual teachers so that a concerted effort can be made to avoid unpleasant personal relationships and to assist the child to obtain the most possible help in his educational efforts.

The use of sedatives, particularly phenobarbital, can do much to avoid unreasonable temperamental outbursts, impulsiveness and ill humor which frequently develop. Alcohol of course must be strictly prohibited and its dangers impressed upon all youthful patients. While smoking in moderation probably has no deleterious effect, yet it should not be encouraged. Such general medical measures as removal of sources

power driven saws and sharp instruments should, of course, be discouraged

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Early Manifestations of Toxic Psychoses

The practitioner will recognize that since the action of all toxic states upon the cortical cells is essentially the same, the early symptomatology will be similar. The first manifestations of toxic inroads upon the nervous system and mental equilibrium of the patient are dulling of consciousness, mild mental confusion, hazy or false perceptions, disorientation and a tendency to scattiness or perplexity. The febrile states, intoxications and other severe toxic situations usually are accompanied by edema of the central nervous system. The term delirium is used to designate this condition in which haziness and dreamy confused states predominate. The term hallucinosis is generally applied to states in which visual or auditory impressions occur in the absence of any marked degree of confusion. It is of the greatest importance for the physician to have some idea of the previous personality of the patient, to be familiar with any psychopathic tendencies and to appreciate the presence of poorly or superficially repressed personality deviations. The degree of psychotic reaction seen early in the course of a toxic process and the general trends which the early psychotic manifestations take are determined to some extent by the nature and severity of the toxemia but to a much larger and more significant extent by the vulnerability or the psychopathic predisposition of the personality. All practitioners of medicine have observed delirium in certain unstable individuals occurring with fevers of 100 to 101 F. and evidence of only minor toxemia, while other more closely integrated personalities withstand grave toxemia or sustained fevers of 104 or 105 F. without giving evidence of transient personality disintegration. The early recognition of this type of mental disorder is relatively simple since there is an obvious physical cause. It is, of course, true that the onset of grave and disabling schizophrenia may be clouded by an abundance of toxic signs and the favorable prognostic statements usually applicable to the toxic psychoses cannot, of course, hold true. In a general sense, however, a toxic or febrile state can be regarded as a test of the mental integrity and personality integration of the patient. The person developing psychotic manifestations in minor toxic states is obviously unstable and may ultimately break down without the stress of physical disease.

The following case is illustrative of this point. A girl of 19 was admitted to the hospital with a brief history of bizarre behavior. Two weeks before admission she complained of headache, vomited several

of toxemia search for and removal of foci of infection and the overcoming of endocrine defects should, of course, be undertaken in each instance

Normal recreational activities should be permitted, particularly such out-of door sports as hiking golf tennis badminton and croquet Such activities as driving automobiles horseback riding, canoeing, bicycle riding, swimming hunting mountain climbing and football naturally are accompanied by considerable danger and should be prohibited Such indoor activities as billiards ping pong bowling, squash and hand ball can be entered into with reasonable safety Such excitements as attendance at automobile races horse races football games, baseball, hockey and boxing and wrestling matches ought to be discouraged

In certain cases in which epileptic equivalent (epileptic automatism) or the convulsive seizures occur with any degree of frequency a constant companion should be provided The danger of injury to self and to others thus can be minimized

Toxic Infective and Exhaustive Psychoses

The mental disturbances accompanying these states of toxic or infectious disorders as well as the state of the profound exhaustion due to chronic and debilitating physical diseases undeniably are the most frequent types of psychoses seen and treated in general practice The physician in general or special medical practice who does not understand their early manifestations and their etiology and who does not have it hand a prompt and efficacious therapeutic program is seriously handicapped

Investigation of the subject of these disorders which might be called broadly 'toxic psychoses' or reactions of delirium demands critical consideration of those reactions due to the effects of exogenous toxins such as alcohol and drugs and endogenous posions arising out of diabetes uremia cardiovascular disease pulmonary tuberculosis the puerperal toxemias and other deficiency and somatic diseases It is said that such reactions constitute about 10 per cent of all psychoses but such a statistical statement is notably misleading when it is realized that the toxic psychoses frequently are not admitted to mental hospitals and that not more than a fraction of such reactions are on statistical file since they are frequently considered only incidents in the course of somatic illness

practically always presents evidence of a real intrinsic disorder The patients objectively appear confused and show evidence of ill adapted consciousness and more or less dreamy fancies with part activity There may be on the one hand quietude with muttering and on the other great activity with raving The patients are extremely apprehensive scared and show marked restlessness At times they go through various movements signifying certain occupations occupational delirium They appear bewildered and confused There may be objective evidence of hallucinations existing such as the dusting off of the bedding picking up imaginary bugs covering the nose to ward off odors cocking the head to listen and answering back the voices In general the behavior of these patients is in keeping with their hazy orientation apprehension fear and the drowsy imaginations they experience Speech usually is irrelevant and incoherent spontaneity may be varied depending on the content The mood is markedly labile usually transitive or impure in type i e one of apprehension and fearfulness in reaction to the hallucinations and delusions present Delusions are prominent and particularly the delusions that they are to be harmed or killed Usually the delusions are shifting and transient and are based to a great extent on the tendency to misinterpret the situation and happenings therein Persecutory trends are often found

Hallucinations are extremely common particularly of the visual type such as animals of all descriptions distorted faces etc Auditory hallucinations occur especially in more advanced states certain types of exogenic delirium in cases with a hyperacousia etc The patients hear voices calling them names telling them something dreadful is about to happen or as in the alcoholic psychoses they may hear lewd appellations Tactile hallucinations are very frequent occurrences The patients feel sensations over the body which they are prone to misinterpret as being due to bugs or worms crawling etc On the other hand a lack of sensibility may falsely indicate to the sick patient that a leg or arm is missing Hallucinations of smell may occur and not infrequently this is apt to be the case in personalities in which there is present a rather large latent homosexual component Illusions frequently are present Disorientation for time place and person or for at least one of the three occurs in the delirious patient Likewise memory and retention defects are present The deficiency in grasp the haziness or cloudiness of consciousness with attention difficulties may explain the defect in the formal memory and intellectual processes Judgment and insight are impaired

times and stated that she heard voices in her ears She became apathetic, remained in bed a considerable part of each day, lay with her fingers in her ears apparently enjoying auditory hallucinations She was found on the floor on several occasions nude with her arms outstretched in a crucifixion attitude repeating endlessly "I died for you She was very resistive refused food and gave all of the clinical evidences of suffering from catatonic schizophrenia A brief review of her history indicated the presence of the typical introvert shut in personality, tendencies to withdraw and shun society of boys and girls her own age She had been a good student and had been graduated from high school the year before with excellent scholastic standing Her teachers had thought her too much of a bookworm and had tried to interest her in athletic and social life but without success

Initial physical examinations revealed a temperature of 101° F, a leucocytosis of [illegible],000 malnutrition and dehydration A diagnosis of acute schizophrenia catatonic type with toxic factors was made There was a purulent discharge from the right ear and x-ray revealed an extensive right mastoiditis Operation was performed within a few days It was necessary to restrain the patient to prevent removal of bandages and injury to the incision Convalescence was slow but after three months the patient had entirely recovered from the psychosis, and the mastoid had healed She returned to her home and took a position in a dental office Three years later she was again returned to the hospital again presenting the picture of catatonic schizophrenia, this time without evidences of somatic disease or toxic state

The case represents the significance of a toxic infective state in bringing to the surface potential psychotic trends which under circumstance of ordinary health may not become evident The physician may, in evaluating the psychiatric significance of such situations have in mind that the closer the toxic psychotic symptoms resemble schizophrenia or one of the other well established psychiatric entities the more likely will there be an unfavorable outcome The more the clinical picture lacks such resemblance and presents mental confusion multiform transitory delusional and hallucinatory states the less clear cut the mental aspects of the picture, the more the likelihood of a toxic psychosis with a relatively favorable prognosis The physician must bear constantly in mind that the total picture has ever to be considered in determining whether a delirious reaction is toxic' determined or is incidental to a more sweeping personality disturbance The delirious picture may be varied but

distinctly an element of danger to the patient Sedatives used in this disorder are of two types (1) hydrotherapy and (2) chemical Of the hydrotherapeutic measures the most helpful is the "continuous" or "neutral" tub The temperature of the water should range from 97 6 F in case of hyperpyrexia to 99 F Care must be taken to keep the tub room temperature constant The patient may be kept in a continuous tub for one to twenty four hours without difficulty The time element is solely dependent on the effect desired and the patient s physical status The delirious patient s vegetative nervous system usually is unstable during his acute illness and therefore shocks in the form of cold water etc must be avoided Cold wet or warm wet packs usually are contraindicated chiefly because the restraining element of the closely wrapped sheets promotes fear

In any case of delirium no hypnotic drugs should be given during the day The patient needs rest at night a time when he is more apt to be disturbed *The type of hypnotic used depends on the type of delirium* and the toxic agent causing the disorder In the main a quickly acting rapidly eliminated or metabolized drug which is not easily accumulated is in order The hypnotic should be given in a large enough dose to cause sleep and should in general be administered before darkness with its concomitant shadows which are prone to increase the patient s disorientation and fear In deliria just beginning complete obtundation occasionally is helpful in breaking off a more prolonged reaction

The nursing problem is an acute one and worthy of a great deal of careful consideration and without question requires not only patient understanding and ingenuity but tact and skill Reassurance with carefully made explanations of the intentions of the nurses and physicians and of the environmental factors attracting the patient's attention must be constantly given the patient Furthermore the management of the environment with the elimination of disconcerting shadows sounds movements etc is necessary for the comfort and progress of the ill patient The patient should be safe guarded from accident during the acute manifestation of the psychosis Suicide is frequent and all caution should be employed in this regard

The collection of topical material offered by the acutely ill patient is of the greatest value in effecting a more adequate personality adjustment of the patient when the acute episode is past This is particularly important in the deliria occurring in a setting of addiction in which instance some analytic synthetic personality study is the only basic way of

Treatment of Toxic Psychoses

The majority of these reactions are avoidable if the physician is alert to the earliest psychotic manifestations. The specific features of treatment will, of course, be dictated by the type of infection or poisoning which is the basis for the psychosis. No headway can be made against the mentally aberrant reactions until the removal of causative factors has been attended to. There are, however, certain general therapeutic principles which apply in the majority of instances and which, if instituted at the earliest moment of psychotic reactions, may prevent permanent mental damage and are often life saving. These are careful eliminative procedures, catharsis, colonic irrigations, gastric lavage, attention to the fluid balance of the body and urinary excretion, promoting elimination via the skin, and in certain types of intoxication the utilization of chemicals to promote excretion, the control of infection if present, and the careful search for and removal of all actual foci of infection. Surgery often is required for the removal of infection as well as in the operative treatment of hyperthyroidism. X-ray and radium may also prove of value. The teeth and tonsils are extremely important. Colitis may be encountered frequently and indicates a definite treatment procedure. The use of specific medical treatment with penicillin, the sulfonamides and streptomycin will overcome infection in a great many instances. The administration of serums, vaccines, etc. may help to secure immunity against various infectious states. Measures to better the efficiency of the "support systems" and protect them from further inefficient functioning should be used, as for instance cardiac stimulants and regulators should be utilized in case of actual or even threatened cardiac decompensation. Dehydration and acidosis must be minimized and controlled. Routine dietetic and tonic treatment is required in the management of the majority of psychoses of this group.

Transfusions are indicated if hemoglobin is below 50 per cent. In the case that cerebral edema is present, diagnostic spinal tap and the cautious intravenous administration of hypertonic solutions, saline and glucose preferably, are indicated. Sedation and its proper application with full appreciation of its dangers is important. In general in the deliria we consider sedation indicated but primarily and only to preserve or better the patient's physical status by allowing for adequate rest. Sedatives given to the delirious patient for the pleasure and convenience of the environment not only are poor medical therapeutics but are

recovered should not be permitted to return too soon to positions which create stress and fatigue Finally the physician should be alert to the earliest symptoms of psychosis and should if he has made himself familiar with the personality predispositions of his patient be able to foresee the development of mental phenomena

Exogenous Toxic States

Alcohol—Without regard to the therapeutic use or uselessness of alcohol it is universally conceded that the nervous system is particularly vulnerable to its effects in large amounts Even in moderate doses alcohol lessens motor activity increases reflexes diminishes physical strength lowers the fatigue point interferes with clarity of ideation impairs capacity for judgment and mental work interferes with the sharpness of memory and the stability of the emotions In addition to the gradual and pernicious intellectual emotional and moral deterioration which are the inescapable sequelæ of excessive alcoholic indulgence there are also psychotic states resulting directly from its cellular damage to the nervous system Approximately 10 per cent of all mental disease is said to be traceable directly to the effects of alcohol

It is important for the physician to recognize the earliest manifestations of alcoholic psychoses since it is possible by immediate and appropriate therapy to avoid the serious sequelæ of the various types of alcoholic psychoses For example *delirium tremens* usually begins acutely either during excessive alcoholic sprees where adequate nutrition and rest have been neglected and yet there are certain readily recognizable signs which antedate by many hours or several days the actual appearance of the major psychosis There is pronounced exaggeration of alcoholic tremors an increasing motor restlessness and distractibility which makes coherent conversation difficult twitchings of the muscles of the face and extremities increasing apprehension and a characteristic flightiness of the mind which can possibly be best described as a fear of impending catastrophe Insomnia develops and the physical symptoms of nausea vomiting headache rapid pulse and fever quickly follow If the earliest symptoms of this grave disorder are mismanaged or not adequately treated *the mortality rate is markedly high* Immediate treatment should consist of free elimination accomplished by magnesium sulphate gradual withdrawal of alcohol continuous baths high vitamine diet containing large quantities of yeast and cod liver oil sufficient

attempting to prevent recurrences A prolonged period of convalescence is of great importance in preventing late sequelæ in the acute infections Follow up care of patients in Out-Patient Clinics is needed In general, the prognosis of the toxic psychoses is very good and recovery is the rule The mortality should be small particularly if the essential early treatment is given The duration of the psychosis usually is brief, particularly in acute delirium However protracted toxic states occur Delirious like states may occur in a setting of eclampsia, brain tumor, syphilis and senility In these instances since there is frequently lasting brain damage produced there may persist the characteristic retention defect and confabulation of the organic reactions Furthermore it is of significance that a delirium may be one of a more psychogenic type, such as an hysterical epileptic or tantrum phenomenon Also, in diagnosis prognosis and treatment it is of great importance to realize that a delirium may temporarily cover up a more profound psychotic development, for instance a manic excitement, a schizophrenic reaction or paresis

The physician caring for a patient suffering from toxic mental reactions will have to marshal the family aid in an effort to establish safeguards and also to avoid aggravations of the psychotic manifestations Environmental adjustments are highly significant and effort should be directed toward establishing a relatively simple environment, as few persons as possible should have contact with the patient since many comings and goings much confusion and noise in the vicinity of the patient create disquieting apprehensions and give rise to further perplexity and may accentuate the mental symptoms Many patients especially in the earliest phases of a toxic psychosis, can be readily managed at home if the physician does not become alarmed at the mental phenomena and communicate his fears and insecurity to the patient and family Certainly during the early manifestations of the disorder the physician has the right to assume that the mental symptoms will be transient, if treated promptly and that premature transfer to a mental hospital will temporarily at least add fear and anxiety to the patient's suffering and create a need for sudden readjustments to new surroundings which are difficult for the patient and aggravating to the illness

It should be stressed emphatically that serious and long standing toxic psychoses are preventable by prompt treatment of the earliest symptoms Adequate care in convalescence from long illnesses will prevent the possibility of their development on a basis of exhaustion Patients recently

recovered should not be permitted to return too soon to positions which create stress and fatigue. Finally, the physician should be alert to the earliest symptoms of psychosis and should, if he has made himself familiar with the personality predispositions of his patient, be able to foresee the development of mental phenomena.

Exogenous Toxic States

Alcohol.—Without regard to the therapeutic use or uselessness of alcohol, it is universally conceded that the nervous system is particularly vulnerable to its effects in large amounts. Even in moderate doses alcohol lessens motor activity, increases reflexes, diminishes physical strength, lowers the fatigue point, interferes with clarity of ideation, impairs capacity for judgment and mental work, interferes with the sharpness of memory and the stability of the emotions. In addition to the gradual and pernicious intellectual, emotional and moral deterioration, which are the inescapable sequelæ of excessive alcoholic indulgence, there are also psychotic states resulting directly from its cellular damage to the nervous system. Approximately 10 per cent of all mental disease is said to be traceable directly to the effects of alcohol.

It is important for the physician to recognize the earliest manifestations of alcoholic psychoses, since it is possible by immediate and appropriate therapy to avoid the serious sequelæ of the various types of alcoholic psychoses. For example, *delirium tremens* usually begins acutely, either during excessive alcoholic sprees where adequate nutrition and rest have been neglected, and yet there are certain readily recognizable signs which antedate by many hours or several days the actual appearance of the major psychosis. There is pronounced exaggeration of alcoholic tremors, an increasing motor restlessness and distractibility which makes coherent conversation difficult, twitchings of the muscles of the face and extremities, increasing apprehension and a characteristic flightiness of the mind, which can possibly be best described as a fear of impending catastrophe. Insomnia develops, and the physical symptoms of nausea, vomiting, headache, rapid pulse and fever quickly follow. If the earliest symptoms of this grave disorder are mismanaged or not adequately treated, the mortality rate is markedly high. Immediate treatment should consist of free elimination accomplished by magnesium sulphate, gradual withdrawal of alcohol, continuous baths, high vitamine diet containing large quantities of yeast and cod liver oil, sufficient

sedation to assure adequate sleep at night If the symptoms are of fulminating character, spinal tap and 50 per cent intravenouse glucose should be resorted to

Korsakow's psychosis is more gradual in onset and has as its chief early symptom memory impairment and a tendency to fill in memory defects with confabulatory accounts Delirium usually is not present, although if not promptly treated, the onset of delirium is to be taken as a sign of some gravity Alcoholic neuritis is a common accompaniment in the form of muscular pain, tenderness paresthesias, foot drop or wrist drop and in severe cases paraplegia and absent reflexes The early mental symptoms consist of dizziness, headache and mild confusion The early treatment should consist of gradual withdrawal of alcohol massage, positive galvanic stimulation to the nerves involved followed by negative galvanism, an adequate diet high in mineral and vitamines and free catharsis

Alcoholic hallucinosis occurs commonly in the chronic alcoholics and may be considered a subacute disorder The pronounced physical manifestations of delirium tremens are absent although a certain degree of malnutrition and wasting is the result of neglect of proper diet and hygienic measures The earliest manifestations take the form of apprehension and fear usually unfixed until the condition is well on its way to chronicity There are auditory hallucinations relating chiefly to threatening voices accompanying delusions involving danger of bodily harm to the patient Alcoholic paranoid reactions are most commonly thought to be the accompaniments of chronic alcoholism and are characterized by persecutory delusions suspicions, jealousies strong resentments and in some cases threats of retaliation Treatment early in the course of such paranoid reactions usually is productive of prompt recovery, but approximately 10 per cent of such case go on to the development of chronic paranoid reactions

Alcoholic deterioration is a very gradual slowly developing, ethical volitional and emotional change occurring in the habitual drinker There is much ill humor and irascibility, but in some cases there are jovial, careless, flippant and facetious moods The early stages of alcoholic deterioration are characterized by an unreliability, tendency to prevarication, inability to make sustained effort in regular occupation moderate impairment of mental efficiency and gradual deterioration of memory Withdrawal of alcohol usually brings the deteriorating process to an

abrupt end although reconstructive measures are not particularly productive

The physician, under whose care an alcoholic has been placed in the early course of the disorder must watch carefully for evidences of underlying personality maladjustments which are probably causative The majority of chronic alcoholics do not reach mental hospitals It is unquestionably true, however that alcohol is responsible for a large percentage of mental disease in the progeny, for homicidal and sexual crimes and for a considerable proportion of suicides or attempted suicides The underlying emotional instability or psychopathic tendency is the important factor in determining whether or not a person may become permanently mentally ill as a result of alcoholic addiction Where alcoholism occurs as a complication of some other mental disorder schizophrenia manic depressive or paresis the treatment of course should be directed at the underlying condition

When alcoholism per se is to be attacked therapeutically, it must be dealt with promptly and by a thorough investigation of the factors of the patients' life and personality The patient must be willing to place himself *absolutely in the hands of the physician and to follow religiously his* directions and supervision In our experience the revelation to the patient of the psychological significance of his alcoholism has been more or less a complete surprise The opinion which he has long accepted is that his habit is merely one of moral turpitude and in his half-hearted struggling against the condition he has come to the conclusion that it is a mysterious inherited defect and inevitable Complete abstinence should be demanded The patient will often wish to make compromise, promising to drink only beer or light wine but these milder beverages are merely bridges back to the consumption of stronger alcoholic drinks The mental hygiene of early alcoholism should consist of the painstaking analysis of the patient s character and personality structure the establishment of regular habits the cultivation of hobbies and social recreation of a wholesome sort together with adequate physical exercise It has been possible in a number of instances in our experience to accomplish three or four year cures to date by such a broad attack on the problem and by requiring the patient to report personally for an interview twice a week and later once a week then after a series of victories have been won to report once each month

Drug Addiction —It is best not to consider drug addiction as a disease entity but rather as a symptom of underlying personality defect

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on the basis of either intellectual insufficiency, lack of adequate emotional control, faulty habit training, social contagion or maladjustment of the instinctive life. Morphine and cocaine produce transient mental disorders, chiefly delirium, and more lasting changes involving moral as well as intellectual characteristics. It should be remembered by the physician that the complete understanding of drug addiction can only be obtained by recognition of the potential personality traits which lead to the condition. The practitioner must prescribe narcotic drugs only with the greatest of caution and with a complete appreciation of the general personality make up of his patient. Inherently unstable personalities readily become addicted even with narcotic administration of short duration and in small doses. A fairly large percentage of all cases follow the use of narcotic drugs for the relief of pain and insomnia. In these cases grave responsibility must rest upon the physician who prescribes the drug.

The barbiturates, bromides and chloral may become habit-forming. The physician under whose care such a patient comes early in the course of the addiction should have two chief concerns: first, withdrawal of the drug, and second, a long period of treatment including psychotherapy and attempts at life readjustment. If recovery is to have any permanency the therapy must be based upon general physical improvement, reeducative, moral and reconstructive treatment.

Lead.—The toxic mental manifestations of lead poisoning are due specifically to the action of the poison on the nervous system. Slight erratic tendencies and transitory mental aberrations coming under the observation of the practitioner should make imperative an inquiry into occupation and possible exposures to lead or other chemical poisons. The earliest symptoms usually are of physical character in the form of headache, abdominal cramps, constipation and insomnia. Prompt treatment and industrial hygienic measures may forestall the development of lead encephalopathy with its often permanent mental damage. If the condition is untreated and exposure to the toxins continues, delirium, hallucinations, delusional states, mental confusion and convulsive seizures may follow. Neuritis may be encountered in the form of wrist or foot drop, atrophy of the muscles of the extremities, paraplegia or pseudo tabes. Sodium thiosulphate preparations are very efficacious, particularly in the early treatment of the lead and arsenical poisonings. For further discussion of lead poisoning see Vol IV, Chapt XVIII B.

Vol VII 948

Endogenous Toxic States

It may be taken as an axiom that every somatic disease has emotional and mental as well as a physical expression. The physician must bear in mind that none of the psychotic reactions which accompany somatic pathology are disease entities. The terms "puerperal psychosis," "influenzal psychosis," etc., are misnomers. More important than any attempt to remember individual reactions is the anticipation on the part of the physician of the likelihood of mental symptoms and his ability and readiness to cope with them. It is undoubtedly true that here a knowledge of the psychiatry of internal medicine often means the difference between a return to mental health or a damaging mental illness of long standing, between life and death.

Post-puerperal Toxemias.—The psychoses developing during the puerperal period may be in most cases regarded as predictable. There are evidences recognizable of deficiencies in the patient's personality make-up before the onset of severe toxemia. The puerperal state with its occasionally severe toxemia does not produce any special type of psychosis. Associated with its manifestations are factors and features which reveal the patient's inner adjustment to life and particularly to the situation which has been brought about by childbirth. Efforts at prevention or alleviation may be enhanced by a closer analysis of the individual factors in each case making for maladaptation and by attention to the stresses of the new or specific experience serving as a precipitating factor.

Epidemic Encephalitis.—Epidemic encephalitis may give rise to a variety of mental symptoms (see also Vol. VI, Chapt. III). The earliest signs of mental involvement are likely to be irritability, restlessness, marked motor agitation, delirium with fleeting hallucinosis, lethargy and paranoid delusions. The absence of mental symptoms in the acute stage or in the early convalescence does not make it impossible for them to appear in the chronic stage. The disease is so protean even in its forms of onset and the history given is so vague that the physician not infrequently has to make his diagnosis from the signs and symptoms, both neurological and psychological, of the later stages. The prolonged mental effects of the disease have created a special problem in administration. The curious effects of the illness on conduct, especially of children and adolescents, have not only created a social problem but a medical legal one as well. The earliest symptoms of post-encephalitic behavior dis-

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cutaneous and digestive although in certain cases the nervous and mental symptoms antedate the appearance of the classical skin lesions gastro intestinal symptoms and neuritis (see also Vol IV, Chapt XIII) The earliest symptoms of mental involvement are apt to be either in the nature of a depressive state mild mental confusion with memory loss or a delirium of the toxic type One of our patients two weeks after the appearance of physical manifestations became apprehensive talked in an irrelevant fashion frequently cried out in the night complained of depression and threatened suicide On one occasion she attempted to jump out of the window and on another abused her children She wandered away from home fell into the hands of the police and was sent to a psychopathic hospital There were transient poorly defined paranoid delusions and hallucinatory episodes The liberal administration of nicotinic acid 200 to 400 mgm daily by mouth and parenterally should be instituted as soon as pellagra is suspected Riboflavin 1 to 3 mgm daily is also essential Liver powdered brewers yeast 2 to 10 gm daily and iron to combat the anemia are useful The disease which is due to faulty nutrition should be treated in its incipient stages by abundant diet with adequate mineral and vitamine content

Pernicious Anemia—It is doubtful if pernicious anemia has any specific picture The incidence of psychotic mental aberrations is low and is said to occur in approximately 4 per cent of cases Unquestionably however *mild manifestations of mental impairment occur in the* majority of patients suffering from this disorder The earliest recognizable psychic deviations occur in the form of mild mental confusion forgetfulness vague suspicions mental fatigability apathy mild depression and anxiety In the largest percentage of psychotic cases paranoid symptoms are predominant accompanied by marked irritability and severe disturbances of orientation The mental accompaniments most frequently are relieved by *prompt specific therapy* but a few become permanently mentally sick Just as in all toxic and exhaustive states the mental aberrations incident to pernicious anemia take the form determined by personal predispositions and if the physician is thoroughly familiar with the personality make up of his patient the mental symptomatology may be predictable For further discussion of pernicious anemia see Vol II Chapt XVI

Uremia—The medical picture of uremia is well understood and the mental *reactions of severe uremic intoxication take the form of clouding* of consciousness depression or occasionally euphoria rambling inco

order in children (see also Vol VII, Chapt III) are usually to be found in the form of undue aggressiveness There is a curious egocentricity and disregard for the rights of others, a pressure of activity and restlessness, which creates a wide variety of irresponsible and unpredictable behavior There is probably no actual impairment of intellectual capacity, the changes being usually confined to the emotional and volitional fields It is not uncommon after the development of the chronic stage of encephalitis to encounter such overt behavior as stealing, truancy, vagrancy, lying, precocious eroticism and tendencies to violence Punishment has little or no effect except to exaggerate the behavior disorder Some authors have called attention to inverted sleep rhythm with most troublesome nocturnal wakefulness It is of the greatest significance for the practitioner, who has carried a patient through the acute stages to be constantly alert to the development of behavior disorders Probably the earliest manifestations are lack of ability to concentrate, a peevishness and mental fatigability

The management of the convalescent phase will require dexterity The environment while meeting all of the medical needs of the child must be kept as impersonal as possible There is a danger that undersirable traits permitted to have full play during the convalescence may become firmly fixed It will be necessary for the child to be managed carefully to wean him away from the omnipotent state into which his illness has precipitated him It is most difficult for the child who is going through a stage of rehabilitation, to give up special privileges to lose his supremacy and power and feeling of importance which went with his illness There will develop conflict between the desire on the one hand to get well enter again into competition and take old responsibilities, on the other hand, there will be the temptation to assume a passivity which will allow him to indulge in the protection which prolonged illness gives The child convalescing from acute encephalitis goes over readily into behavior disorders of considerable magnitude The physical pathology may be entirely lacking or may vary from minor imbalance to ocular muscles and partial ptosis of one lid to the full blown post-encephalitic Parkinsonian syndrome with its muscular rigidity and retarded voluntary movements ('bradykinesis") The early management of post-encephalitic behavoir disorders, particularly in children is largely one of reeducation and painstaking psychological and environmental therapy

Pellagra —The early manifestations of the disease are likely to be

Prodromal Stages of Senile Deterioration

Personality changes appearing after the age of sixty should arouse the critical interest of the physician to the possibility of the beginning of senile psychosis. There is likely to be a prodromal period of several months duration in which the patient is irritable, sleeps poorly, complains of malaise, muscular weakness and anorexia. The clinical picture in these earliest stages is not unlike a neurasthenic state, although the question of differential diagnosis is not likely to be of consequence when age factors, personal history and the vascular changes of advancing age are given consideration.

The practitioner under whose care an aged individual is placed for the treatment of physical disease must be alert to the development of mental symptoms during the acute stages of illness and in convalescence. The personality structure and mental integrity of persons of advanced age are particularly vulnerable to the effects of toxins and the fevers of infectious diseases. The mental confusion, disorientation, memory defects and unstable emotionalism following closely on physical illness, however, must not be too hastily diagnosed as progressive senile deterioration. With increase in physical strength and elimination of toxemia, return to essentially normal mental status may occur. Diseases which affect particularly the circulatory efficiency in the brain or heart are capable of producing alarming transient acute delirium or more or less long drawn out confused mental states.

Sudden exaggeration in persons of advanced years of some minor long standing personality difficulty should arouse the physician's suspicion of the onset of the senile deteriorating process. Henderson and Gillespie state that "there is not so much a change in personality as a caricature of it." Thus a life long trait of saving and caution in financial matters may become exaggerated to the point of miserly hoarding of useless scraps and trinkets and extreme penuriousness. Or a mild distrust of others and hypersensitiveness may develop into troublesome suspiciousness, delusions of persecution with threats of retaliation or resort to legal prosecution. Old buried ill feelings and grudges may become ignited and inflame the patient to actual attempts to do bodily harm or to ill advised complaints to neighbors, friends or the police. With a progressive loss of higher moral and ethical functions due to advancing cortical deterioration, inhibitory control is seriously diminished and formerly repressed asocial or antisocial tendencies are permitted to

herent tall hallucinosis persecutory delusions, restlessness and agitation

Endocrine Toxemias —Hyperthyroidism is almost invariably accompanied by many mental symptoms in its early course (see also Vol III, Chapt XV-A) The physician must exert great care to differentiate the early course of hyperthyroidism from the various manifestations of psychoneurosis The nervous and mental symptoms most common to the disorder are anxiety apprehension insomnia emotional lability with irritability crying rapidity of speech and thought and terrifying dreams The diagnosis is of course a problem of complete medical study including basal metabolic estimations As the hyper function continues, mental symptoms become more and more like manic episodes with excitement, flight of ideas distractibility rapid loss of weight, great motor over-activity and exhaustion Removal of the source of the difficulty is often followed by dramatic recovery

Hypothyroidism or myxedema is characterized by the prompt development of loss of interest intellectual and motor retardation apathy, somnolence and memory defects Cretinism of course, occurring in childhood results in mental enfeeblement unless treatment is instituted One of our adolescent patients suffering from myxedema came to us in a state of depression was markedly retarded self-accusatory, had feelings of unworthiness and inadequacy and had failed in school Physical studies revealed that she was 50 per cent overweight, suffered from amenorrhea and had a basal metabolic rate of minus 27 per cent Prompt institution of thyroid therapy resulted in weight loss motor activation to the level of normal and complete recovery from the mental symptoms

Senile and Arteriosclerotic Psychosis

The gross mental symptoms of fully developed senile and arteriosclerotic psychosis offer no diagnostic difficulties The earliest manifestations however, may not be clearly recognized because of their insidious development and the vagueness of the personality alterations Early recognition attains great importance in view of the fact that the patient with senile dementia is readily victimized by designing individuals and thus may bring disgrace to his family and waste his resources The physician must be alert to proper and early evaluation of the degree of senile loss of inhibitory influences if possible legal and moral entanglements are not to sweep away the whole of a constructive life

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obtrude There are manifest dangers in the moral laxness the unreasonable outbursts of temper and the transient stimulation of sexual interest which may result Safeguard of the patient and his family depend upon early recognition of the deteriorating process and prompt institution of treatment

As age advances there is a progressive narrowing of interest and concomitant egotistic focusing of attention Contraction of the personality becomes progressively more marked mental vision is restricted the mind becomes rigid and powers of comprehension diminish Changes in temperament are rapid and emotional lability may be extreme Obstinacy, quarrelsomeness the inciting of petty arguments resentment against family and friends because of imagined slights uncertain memory and increasingly selfish behavior become predominant symptoms Normal sympathy is lacking or sickly sentimentality with lavish and injudicious charities may occur Habits are resistive to change, and suggestions for improvements or new ideas are met by unreasonable protests

In the early stages of deterioration especially where memory defects are marked the practitioner should warn the family of the possible dangers The patient in his confused forgetful way may wander away and become lost or be injured in city traffic he may turn on the gas and forget to touch a match to the burner thereby endangering the lives of the occupants of the house or he may put down a lighted match forgetting to extinguish it One patient of 69 was brought to us because as the first pronounced symptoms of the onset of senile deterioration she had turned on the water faucets in the bath tub preparatory to bathing and had then gone to a neighborhood store to do the customary shopping Damage to the floors and ceilings necessitated extensive repairs In some instances insomnia and nocturnal restlessness indicate the onset of the disorder The danger of falling downstairs in the nightly ramblings must be considered and guarded against A reversal of sleep habits may be one of the early prodromes of senile mental change Elderly persons tend to doze and nap during the day retire very early often immediately after the evening meal and awaken shortly after midnight or in the early morning hours to ramble about the house Personal belongings or household articles may be put away and forgotten the same story is told and retold innumerable times conversation becomes stereotyped and filled with exhausting detail and circumstantiality

The age of onset of senile or arteriosclerotic mental changes is determined to a large extent by hereditary factors and to a smaller extent by physical and mental stresses. Long debilitating illness undoubtedly takes its toll in the nervous system and vascular resistance to advancing age; excessive use of alcohol seems to make generally for premature senile mental changes; excessive worries, anxiety, financial stresses and mental suffering unquestionably reduce the mental reserves and help to render the nervous system more vulnerable. Although the age of 60 is often set as an arbitrary limit for the onset of the senile period, it is obvious that many persons of 80 are mentally younger and more completely integrated than others of 65. Individual differences are marked.

Physical changes are, of course, obvious, but the objective appearances of senile physical deterioration are not suitable criteria for judging retention of mental capacity. The earliest evidences of senile physical change are to be found on careful neurological examination. There is often a fine tremor which shows clearly in the handwriting; the gait is cautious and later of shuffling character; speech is slow, hesitant and sometimes tremulous. In the arteriosclerotic types vertigo and tinnitus are prominent early signs. Later there develop apoplectiform seizures, transient aphasias and sensory disturbances.

The differential diagnosis between *senile* and *arteriosclerotic psychosis* is largely an academic matter, although in their earliest manifestations there are a few significant differential points. *Arteriosclerotic brain disease* tends to make its appearance somewhat earlier, usually in the late fifties or early sixties. The initial symptoms are most often confined to evidences of cerebral vascular insults. The commonest mode of onset is an apoplectiform seizure of major or minor character, and the development of mental symptoms dates from such an occurrence. These subsequent mental symptoms may be in the earliest stages little more than an awareness on the part of the patient that he tires more quickly, that sustained mental effort is impossible, that initiative, self assurance and powers of comprehension are diminishd. Work formerly done with ease becomes increasingly difficult, memory defects, emotional instability, outbursts of unreasonable anger occur and gradually the full blown clinical picture of arteriosclerotic psychosis makes its appearance.

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In the early stages of deterioration, especially where memory defects are marked, the practitioner should warn the family of the possible dangers. The patient in his confused forgetful way may wander away and become lost or be injured in city traffic; he may turn on the gas and forget to touch a match to the burner, thereby endangering the lives of the occupants of the house; or he may put down a lighted match forgetting to extinguish it. One patient of 69 was brought to us because as the first pronounced symptoms of the onset of senile deterioration she had turned on the water faucets in the bath tub preparatory to bathing and had then gone to a neighborhood store to do the customary shopping. Damage to the floors and ceilings necessitated extensive repairs. In some instances insomnia and nocturnal restlessness indicate the onset of the disorder. The danger of falling downstairs in the nightly ramblings must be considered and guarded against. A reversal of sleep habits may be one of the early prodromes of senile mental change. Elderly persons tend to doze and nap during the day, retire very early, often immediately after the evening meal, and awaken shortly after midnight or in the early morning hours to ramble about the house. Personal belongings or household articles may be put away and forgotten; the same story is told and retold innumerable times; conversation becomes stereotyped and filled with exhausting detail and circumstantiality.

is at times advisable if the patient shows a tendency to wander off and become lost to provide a constant companion Choice of such a person must be made with care inasmuch as resentment against tactless watchfulness may destroy any benefits of this safeguarding measure Dangerous trends such as uncontrollable violence sexual aggressiveness indecent exposure of sexual organs or sexual assault upon small children must be met at once by close supervision This often necessitates institutionalization

States of transient delirium are best managed in a sanitarium or hospital and convalescence might be arranged in a secluded country place free from noise and confusion Treatment of the causative factors of such toxic mental manifestations should of course be prompt and thorough

Sedatives may be used with caution in the early stages of the disorder If error is made in this regard it is usually in the direction of over sedation The physician should resist the temptation to produce drug restraint since in addition to the organic cerebral change of senility there will be readily added a drug toxemia Elderly persons especially those suffering from advanced vascular sclerosis with arterial hypotension are extremely susceptible to sedative and hypnotic drugs and over doses may lower blood pressure markedly and slow the blood stream to the point where cerebral thrombosis becomes a possible danger The mild relatively non-toxic and readily eliminated barbiturates are very effective in small doses

It is especially true in the earliest phases of senile psychosis that occupational therapy finds great usefulness Wood carving the making of toys ship models hooked rugs basket making weaving and out of door activities such as flower gardening or the raising of animal pets are particularly helpful in directing the interest of the patient away from the egocentricity and narrowing of interest that are such constant factors in the early stages of the disorder A carefully planned therapeutic program should include adequate rest during the day physical exercise appropriate to the patient s somatic state occupational therapy dietary regulation attention to bowel and bladder functions freedom from environmental stresses and avoidance of argumentation and bickering By such means much can be done in the earliest phases of senile and arteriosclerotic mental change to stem or at least retard the progressive process of personality disintegration

Management of Early Stages

As in nearly all instances of the earliest phases of the development of mental symptoms the general practitioner of medicine is consulted when inexplicable behavior is encountered in aged persons In a general way errors in management are apt to be due to over emphasis on the purely mental symptoms presented and the generally hopeless prognosis obtaining in well established senile or arteriosclerotic psychosis The gravity of the presenting mental symptom in no way should discourage or obviate the need for careful physical studies

An error which sometimes has serious consequence is the assumption that physical findings are relatively unimportant and therefore only casual examination and institutional disposition of the case are indicated If the physician will bear in mind the vulnerability of the person of advanced years to even mild toxic states and if careful search is made for removable sources of trouble his efforts may be rewarded by dramatic improvement One of our patients age 63 presenting marked mental confusion memory defects and personality disturbance of considerable severity made prompt and striking improvement after the removal of five infected teeth The presence of syphilis as a complicating factor amenable to treatment may be uncovered by the Wassermann test Laboratory procedures may throw clear diagnostic light upon the often obscure mental symptoms that may mark the transition from normality to apparently irreversible senile deterioration

Senile or arteriosclerotic psychosis is not to be too lightly diagnosed The mental symptoms almost classical in early senility have their prototypes in old age in fatigue states marked secondary anemia long standing recurrent diarrheas of old age and congestive heart failure It is not an uncommon happening to receive into a mental hospital under commitment as senile dementia aged persons suffering from all manner of recoverable physical disease When the somatic disorder has been relieved recovery of mental function may parallel physical convalescence

Early in the course of senile mental disorders rest and freedom from fatigue should occupy the therapeutic interest of the physician Environmental adjustments conducive to mental serenity may eliminate many troublesome stimuli which tend to aggravate the patient It is best whenever possible to carry on the management of the earliest phases of senile mental disorders in the home giving due consideration of course to the safety of the patient and members of the household It

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Manic Depressive Psychosis: Early Manifestations

The gross affective disorders or disorders of emotional reaction generally are grouped under the heading of manic-depressive psychosis. There are, however, many mood changes both in the direction of elation and depression which are not beyond normal limits. We refer to the alternating periods of over activity and retardation or the feelings of cheerfulness and discouragement which do not reach the psychotic level. Manic depressive reaction in its psychotic degree is described elsewhere (see Vol. VII, Chapt. IX), so that our discussion will be limited to a delineation of the constitutional alternations of emotional reaction which antedate, often by many years, the appearance of a disorder of psychotic proportions such as are described in this other place.

Recurring periods of inefficiency and efficiency appear in normal persons unrelated to factors of rest, fatigue and toxemia. In the stage of excessive optimism patients rarely consult the physician. It is only when the efficiency of the depressed or "blue" individual is so reduced that he himself regards the reaction as pathological or beyond his customary mood swings that he seeks advice from medical sources. The first person who comes in contact with this degree of affective disturbance is the general practitioner, and so frequently the patient merely explains that his chief symptoms are feelings of marked physical and mental inertia, a general feeling of not being 'up to par.' The patient usually is seeking some physical explanation for his abnormal feelings.

These mild manic-depressive reactions are becoming an increasingly prominent item in the practice of physicians and psychiatrists. Their import as to future psychotic reactions is difficult to evaluate. However, it may be regarded as a general principle that if the mood swings are sufficient to cause the individual loss of time from work or necessitate a period of semi-invalidism or restricted activity and if they recur with considerable regularity, their significance as unfavorable prognostic signs for the future cannot be overlooked. Certainly in the mental hygiene clinics and in school and college mental hygiene departments their frequency apparently is increasing. In a large Eastern university one of us has found that some recurring disorder of affect is the second most common problem with which the mental hygiene clinic has to deal.

There is little doubt that manic depressive, even in the mild prepsychotic phases, represents the most definitely constitutional disorder found anywhere in the field of psychiatry. If anything can be done in

the way of prevention or permanent emotional readjustment of the patient it must be done in these earliest phases of the manic depressive manifestations

Hereditary Predisposition

In 188 Kahlbaum spoke definitely of the manic and the melancholic phases not as two separate types of mental disorder but as two stages occurring in the same disease He used the term cyclothymia to designate the milder recoverable types while the more grave lasting types he called circular In 1896 Kraepelin formulated his conception of the manic depressive psychoses with hereditary predisposition as the most important etiologic factor

Kraepelin and numerous others have stated that 60 to 80 per cent are hereditarily predisposed When this type of disorder exists in the parents the same type is likely to show itself directly among the descendants but other types of mental disorder e g schizophrenia may also occur Vogt reported that in 2 per cent of his cases manic depressive psychosis existed in the father or the mother and in 35 per cent in brothers and sisters Rehm found among 44 children from 19 families with manic depressive parentage that in 5 per cent there was psychic degeneration and in 9 per cent abnormal emotional predisposition Manic depressive diseases in the parents according to Myerson are followed in the progeny by manic depressive tendencies

Lang writes of manic depressive reactions (1) We have to do with a very definite hereditary illness the features of which are very complicated At times in families with members with circular psychosis simple direct inheritance of marked temperaments is evident The tendency to the development of cyclic psychical as well as somatic disorders is striking Circular metabolic developments, arthritic in character are frequent in these families ( ) Mania and melancholia as observations on one cell twins show are not separable on a hereditary basis (3) The time of onset of circular disorders is hereditarily fixed even though at times outside constellation factors may modify the cycles (4) Critical times are paramount in the circular phasic disorders Thus puberty pregnancy birth menopause and also severe infections play an important role

In making a search for the origins of certain manic depressive personality predispositions Anthonisen finds in the parents in 40 per cent of his patients suffering from depressions reactions which are charac

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extrovert is sociable energetic bright and cheerful with a strong tendency to go into action He is not reflective and his strong emotional reactions usually are transitory The extroverts are further described as outgoing persons They are the executives and the effective people who get things done in the world Extroversion can be so pronounced that it produces conflict with the environment When the interest in things and people and the pressure for action become too great the individual is occupied with unproductive work Clinical experience would seem to justify the assumption that when some unknown factor which may be contained in the inheritance in the psychopathology produced by the conditions of life in early inhibitory reactions or perhaps in organic tendencies is added to the extroverted temperament the result is likely to be manic depressive psychosis From the standpoint of psychiatry extroversion is in itself not in any sense abnormal but included in it is probably the potentiality of the typical cyclothymic make up

The cyclothymic or syntonic temperament is the up and down or the alternating type varying between the mercurial emotional reaction with seemingly quick ready and an appropriate thought process and a pessimistic readily discouraged moody or worrisome reaction with over-conscientiousness and dread of the future From the purely mental side Meyer Hoch Kirby and Bleuler have pointed out that the mental make up of the manic depressive shows a disposition to affect swings from states of elation to states of depression in people who are generally of the frank open personality type They are either bright talkative optimistic aggressive people who make light of the ordinary affairs of life or else they take a gloomy outlook bewail the past and make mountains out of molehills The variability of affect may never go beyond normal limits The mood changes of most people are transitory and interfere little with daily activities When manic depressive disorders arise without any apparent precipitating factors they are termed constitutional or endogenous

The manic pre disposition shows an exaggeration of the extroverted qualities labile emotions vivacity buoyancy and sprightliness, a dynamic push of energy thinking that is readily distractible quick and faulty judgements and an easy rationalization of mistakes In the depressive predisposition there is mental inertia the emotional tone is that of flatness there is no spontaneity dynamic push is absent thinking is preoccupied with the mistakes of the past and discouragement about the

terized as nervous, highstrung, intolerant, domineering or easily hurt. In 25 per cent one of the parents showed definite depressive traits.

Early Personality Traits

The beginnings of manic depressive psychosis are traceable far back into the pre-psychotic personality. An exhaustive study of normal persons shows that the great majority of individuals display some cyclic variations in mood and emotional reactions, the frequency of which varies from two weeks to two months or even longer. In a fairly large proportion of these normal persons there has been found a rather marked variation of the cycle. This may change from mild elation and periods of hyper-efficiency not yet reaching a psychotic manic level, to mild periods of inefficiency and depression still quite safely distant from real melancholia. During the "up phase" there is zest for living, eagerness for action, aggressiveness and optimism, while in the "down phase" there are feelings of inadequacy, mental and physical inertia and an awareness that the customary verve, spirit and interest are lacking.

It is not definitely known, nor perhaps is it possible to show statistically, what percentage of people showing these rather marked emotional fluctuations develop in later life true psychotic episodes of manic depressive. In our observations there tends to be an increasing frequency and an increasing severity until the psychotic level is closely approximated. There is evidence to show that in persons in whom such cyclic variation is pronounced, unusual physical stresses or emotional strains tend to increase the magnitude of the reactions. Excessive fatigue, focal infections, toxic states, faulty nutrition and endocrine disturbances tend to magnify their severity. Worry, disappointment, frustration, economic insecurity and family strife add their unfavorable influences to these emotionally vulnerable states. It seems to be a reasonable conclusion from our experience among college students that these trends are exaggerated by the excessive pressure of academic work, anxiety overcoming examinations and feelings of insecurity about future placement. Any therapeutic program, therefore, which minimizes strains and avoids unnecessary stresses does much to reduce the magnitude of the mood variations.

The basic personality which makes up the soil for manic-depressive reactions is the extrovert type as described by Jung. The temperament is known as cyclothymic, syntonic, or cycloid. Predominantly, the

disorder characterized by acute exacerbations Kraepelin in his classical description has included in the manic depressive category the mild affective disorders He states "We include (in the manic depressive group) certain slight and slightest colorings of mood some of them periodic, some of them continuously morbid which on the one hand are to be regarded as the rudiment of more severe disorders on the other hand passing over without sharp boundary into the domain of personal predisposition"

Zilboorg feels that it is doubtful whether the so called free interval between the alternating phases deserves its name For just as the spontaneous recovery of a schizophrenic is rarely more than a social recovery so is the recovery from a manic or a depressive attack rarely more than a social recovery One may therefore state in a general way that the manic depressive particularly the depressive reactions have a specific psycho biological history a special development of the instinctual drives a special psychological structure and a special set of dynamic characteristics

Physical Characteristics

There are certain readily recognizable physical characteristics which when observed in combination with marked mood swings serve to add substantiation to the physician's early recognition of the manic-depressive pattern The physical characteristics most commonly found in the cyclothymic make up are described by Kretschmer as making up the pyknic bodily type These persons possess relatively short stature thick necks stocky rounded muscular build square not very supple hands florid skin broad face large head and thorax The pyknic readily accumulates abdominal fat Kretschmer states that there is a clear biological affinity between the psychic disposition of the manic depressives and the pyknic types There is a clear affinity also between the schizophrenics and the athletic asthenic and dysplastic types Conversely there is a weak affinity between the schizophrenics and the pyknic and a weak affinity between the manic depressives and the asthenic and athletic types Kretschmer describes the five cornered face as typical of the physiognomy of the manic depressive reaction types while the long or short egg shaped face is characteristic of the schizoid types Lewis Freeman and others have found at autopsy in manic depressives evidences of large over compensated cardio vascular systems hemorrhages

future no mistake is left forgotten but is revived and from it are derived feelings of unhappiness

Later Personality Traits

The statistical figures of manic-depressive psychosis which show an annual rate of first admissions for manic depressive psychosis of 11 000 and a constant number of residents with manic-depressive in the hospitals of the country at greater than 140 000 fail to convey an adequate conception of the medical public health and social problems which this illness entails For every patient sent for treatment to a mental hospital the practicing psychiatrist probably has under his observation at least four others who are exhibiting varying degrees of affect and mood disorder These may not be so pronounced as to indicate institutional care Certainly they may be severe enough to produce behavior deviations which lessen the efficiency of the individual in all his contacts and reduce not only his own but also the economic and social constructiveness of those who are immediately related to him Therefore of necessity these disorders lower the general morale of society

It seems quite understandable that in late adolescence and in early adult life, when such emotional patterns are just beginning to become fixed, and when the stresses of academic competition represent the severest of mental stresses and strains we should encounter these mild affective disorders with great frequency particularly in the colleges During the depressive phase the individual is slowed up, his ability to concentrate and retain academic material is impaired The student is puzzled suffers from feelings of failure and inadequacy usually is struggling with insomnia and is driven by his own feeling of reduced efficiency and concern or is directed by some interested teacher, who has recognized the rapid decline of mental acuity to seek medical advice In the opposite state however of exhilaration curricular activities are boring too restricting the student needs room to expand and after a period of academic efficiency the routine work is neglected in favor of more ambitious schemes and he is referred to the psychiatrist as a disciplinary case or because the instructor has sensed the presence of pathological pressure of activity

There is some question as to whether the affective abnormalities of elation and depression should be considered the true disorder or whether we are justified in considering this group as suffering from a chronic

disorder characterized by acute exacerbations. Kraepelin in his classical description has included in the manic depressive category the mild affective disorders. He states: "We include (in the manic depressive group) certain slight and slightest colorings of mood, some of them periodic, some of them continuously morbid, which on the one hand are to be regarded as the rudiment of more severe disorders, on the other hand passing over without sharp boundary into the domain of personal predisposition."

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into the thyroid gland adenomatous tendencies in the pancreas, pituitary adenoma hyperplasia of the cortex of the adrenal and punctate hemorrhages pituitary atrophies large testes and in general, an increase in size of the endocrine apparatus Clinically, it is not uncommon that hypothyroidism is found in association with depressions The disorder commonly known as menstrual moodiness may well be thought of as a depressive reaction in a person having an underlying manic-depressive or cyclothymic temperament

It has been demonstrated also in investigations by Cannon and others of the neuro vegetative states in relation to emotional reactions that the affective disorders are accompanied by measurable alterations in the sympathetic tonus The manic-depressives show reactions which indicate sympathetic hypertonus while the schizophrenics give responses indicating vagotonia Various pharmaco-dynamic tests employing atropine pilocarpine and adrenalin have demonstrated a hypertonicity of the vegetative system in manic depressive reactions

One of us made comparative observations of blood pressure and blood sugar reactions to ephedrine in the manic-depressives and schizophrenics The results showed that the manic depressives reacted in a manner distinctly different from the schizoids In the manic depressives there was a tremendously greater blood pressure rise than in the schizophrenics or normals The blood sugar response to intravenous ephedrine likewise differed consistently in the manic depressives and schizophrenics Lewis work forms an anatomic basis for an explanation of these greater circulatory responses of the manic depressives Trentzsch has made clinical application of this difference in anatomic structure and capacity for compensation in a circulatory test applied as a diagnostic measure in manic-depressives and schizophrenics He found that 88 8 per cent of manic depressives gave a high rating while 8› 6 per cent of schizoids gave a low rating

Early Symptoms or Prodromes of the Manic-Depressive Reaction

In its inception the manic depressive reaction may be deceiving to the physician The patient usually comes to the doctor complaining of fatigue lack of concentration a feeling of inadequacy and insufficiency loss of interest in work and tendency to withdraw from customary social interests Somatic symptoms of constipation faulty digestion loss of appetite slight resultant weight loss and a feeling of being

generally run down may becloud the true psychic picture They complain of great difficulty in getting out of bed in the morning of feeling unable to go to work of despondency during the early part of the day As the day drags on interest is slightly stimulated inertia becomes less and many patients feel considerably better toward evening Once the physician has discounted the possibility of a purely affective disorder exhaustive and painstaking searches for hidden sources of toxemia foci of infection and other obscure pathology may be undertaken A careful evaluation of the patient's environmental situation past history and personality make up often will lead to a proper conclusion It is true that certain toxic factors may closely simulate the lassitude of an affective depression Wherever found foci of infection and sources of toxemia should of course be eliminated One is also met in certain depressed states having a psychoneurotic coloring by the honest and sincere but misdirected desire of the patient to fix the blame on some physical defect Such mechanisms are difficult to deal with and unless the patient is helped to face the emotional nature of his problem he may become so fixed upon his intestinal sluggishness or his physical inertia that he stubbornly attributes his difficulties wholly to some grave organic disease and makes the rounds from doctor to doctor, receiving vaccines colonic irrigations cathartics dietary regimes etc, until he finally recovers spontaneously from his emotional disorder

A young professional man of 34 came to us with a complaint of a heavy feeling in the back of his head loss of appetite constipation inability to concentrate profound physical inertia and a feeling of personal failure and inadequacy He had been told by a nurse that he probably had some thyroid gland deficiency He unconsciously resisted strenuously the acceptance of repeatedly normal basal metabolic readings as correct or as indicating that no thyroid deficiency existed He finally stated that he would feel much better much less as if he were in some way to blame for his difficulty if his condition had been diagnosed and treated as a thyroid defect He suggested to the physician that in future practice it might be better to deceive the patient into believing that he suffered from some organic disease so as to alleviate his feeling of personal failure

In our experience alcoholism and mild manic depressive reactions have been intimately related As Gregory points out alcohol sometimes masks the painful depression and assists the individual to somewhat neutralize or ameliorate his unhappy emotional state We would counsel

into the thyroid gland, adenomatous tendencies in the pancreas, pituitary adenoma, hyperplasia of the cortex of the adrenal and punctate hemorrhages, pituitary atrophies, large testes and, in general, an increase in size of the endocrine apparatus. Clinically, it is not uncommon that hypothyroidism is found in association with depressions. The disorder commonly known as menstrual moodiness may well be thought of as a depressive reaction in a person having an underlying manic-depressive or cyclothymic temperament.

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In its inception the manic-depressive reaction may be deceiving to the physician. The patient usually comes to the doctor complaining of fatigue, lack of concentration, a feeling of inadequacy and insufficiency, loss of interest in work and tendency to withdraw from customary social interests. Somatic symptoms of constipation, faulty digestion, loss of appetite, slight resultant weight loss and a feeling of being

or less vaguely of neglecting her opportunities She felt that she had probably saved her former fiance from a burdensome married life and that after all he had probably been too good for her She went through a daily routine without complaint but confessed that it was like dragging a heavy weight' Her bearing and manner clearly expressed her emotional state She walked more slowly than usual with her shoulders slumped

In the opposite phase and in contrast to the retardation and inertia there is often early in the psychosis the phase of hyper efficiency and mild elation which might be regarded as the pre manic phase In this reaction exhilaration rather than depression is the primary symptom Thinking and talking are uncommonly simple There are quick oscillations of mood optimism cheerfulness and self confidence radiate from the patient and there is a feeling of elation and well being The patient often loses sight of social propriety intrudes his personal opinions and his company on to people to whom he would ordinarily show the greatest respect Such an aggressive reaction in an individual customarily unobtrusive would represent a distinct over stimulation but there are many persons whose normal emotional tone and psychomotor activity customarily are of such a degree Activity often remains within such bounds that the tilt with the environment is not too sharp and most frequently the individual is not thought to be sick There is an inclination to social aggressiveness a minimizing of the rights of others dogmatism numerous plans somewhat too great ease flexibility and fluency of conversation There is much elaboration triviality and circumstantiality The picture is that of the high pressure optimist who is always in a hurry who brooks no inhibition and for whom insurmountable difficulties are readily explained away and disposed of The ethical standards are somewhat lowered the companionship of questionable people often is a problem and again alcohol may become a complicating factor being taken in a spirit of celebration and conviviality Such patients very rarely find their way into sanitariums and hospitals but if they do occasionally they are a source of much trouble since they set about to right all wrongs to point out improvements to find fault with management, etc

The following case was admitted to a sanitarium for a brief stay preparatory to taking a trip around the world The patient was 4 years of age and had a history dating back to age 14 of alternating phases of over activity and mild retardation The patient arose early wished to

strongly against the use of alcohol in such situations Momentarily, of course, it acts as an anesthetic which renders feelings of self depreciation innocuous The feeling of well being and optimism, which follow immediately upon the ingestion of alcohol, is a most welcome relief from the depressive mood Nevertheless alcohol is also a nervous system toxin, and the net result to the individual is an increase of his depressive trends A recent review of our mild manic-depressive disorders leads us to the conclusion that in possibly 10 to 15 per cent the use of alcohol for the alleviation of recurring depressed moods has led to chronic alcoholism

Even in these milder non-psychotic depressive phases suicide becomes a possibility The patient is inclined to magnify his failures and his minor transgressions to look at the future with hopelessness and despondency and to feel that some graver mental disorder is about to overtake him and therefore feels thoroughly justified in the act of suicide Gregory calls attention to the fact that a great majority of suicides reported in the daily press as of patients suffering from so called 'mild nervousness are of this mild manic depressive type

The following circular case illustrates the fact that a depressive reaction may quickly follow the elated phase and shows how readily an early diagnosis may be missed A woman of 9 was brought to us because of a feeling of depression and sluggishness' About a year ago the patient had her first and only love affair which was abandoned because of the opposition of her parents Following the breaking of her engagement, there was a three months' period during which she felt fine' accomplished a great deal and was 'on the crest of the wave" This reaction convinced the parents and her friends that release from a belated and not altogether satisfactory engagement had been a blessing and had allowed her to feel free to employ her great capacities in constructive ways No one suspected the presence of any emotional difficulty At the end of this period there followed one of relative inadequacy and at the time of her first visit to the psychiatrist she was depressed but not to any profound degree She was not conscious of any strong subjective feeling of sadness or melancholia but felt defeated and dejected Life looked less hopeful, and she felt overwhelmed by her own inadequacy Her mind 'felt heavy' and while she answered questions readily enough, yet her vocabulary had become limited and often at home she was monosyllabic She did not see how she could ever rally herself nor again feel any satisfaction in life She was not definitely self accusatory but spoke of her difficulty as her own fault and more

or less vaguely of neglecting her opportunities She felt that she had probably saved her former fiancé from a burdensome married life and that after all he had probably been too good for her She went *through a daily routine without complaint but confessed that it was* like dragging a heavy weight Her bearing and manner clearly expressed her emotional state She walked more slowly than usual with her shoulders slumped

In the opposite phase and in contrast to the retardation and inertia there is often early in the psychosis the phase of hyper efficiency and mild elation which might be regarded as the pre manic phase In this *reaction exhilaration rather than depression is the primary symptom* Thinking and talking are uncommonly simple There are quick oscillations of mood optimism cheerfulness and self confidence radiate from the patient and there is a feeling of elation and well being The patient often loses sight of social propriety intrudes his personal opinions and his company on to people to whom he would ordinarily show the greatest respect Such an aggressive reaction in an individual customarily unobtrusive would represent a distinct over stimulation but there are many persons whose *normal emotional tone and psychomotor activity* customarily are of such a degree Activity often remains within such bounds that the tilt with the environment is not too sharp and most frequently the individual is not thought to be sick There is an inclination to social aggressiveness a minimizing of the rights of others dogmatism numerous plans somewhat too great ease flexibility and fluency of conversation There is much elaboration triviality and circumstantiality The picture is that of the high pressure optimist who is always in a hurry who brooks no inhibition and for whom insurmountable difficulties are readily explained away and disposed of The ethical standards are somewhat lowered the companionship of questionable people often is a problem and again alcohol may become a complicating factor being taken in a spirit of celebration and conviviality Such patients very rarely find their way into sanitariums and hospitals but if they do occasionally they are a source of much trouble since they set about to right all wrongs to point out improvements to find fault with management etc

The following case was admitted to a sanitarium for a brief stay preparatory to taking a trip around the world The patient was 24 years of age and had a history dating back to age 14 of alternating phases of over activity and mild retardation The patient arose early wished to

plan a full day, called several of his friends and invited them to luncheon, then called an hour later and canceled these invitations. Good humor ran high and his conversation was bubbling and most varied. He offered to assist the psychiatrist in the care of some of the patients, intruded his presence on to several persons suffering from anxiety symptoms, patted them on the back and assured them that "everything would be all right, if they would only forget their worries and snap out of it." Diplomatic attempts to make the patient conform to schedule were met by most pleasant, cooperative intent but the required activity soon lost its interest, and he was off to some new experience. He made a written report of his morning's activities covering thirty-five closely written pages, asked permission to dictate to one of the staff stenographers and when this was declined he got access to a typewriter and typed a highly humorous glossary of sanitarium terms, made up a list including every patient in the sanitarium with a special nickname which he used, and posted the list on the bulletin board in the lounge. He visited three ticket agencies in the afternoon, arranged to go by boat to California, then canceled these arrangements and obtained reservations on a plane leaving for the West Coast because he had "no time to waste on slow boats." It is interesting that many of his criticisms were sensible, that his nicknames were most a propos and some of his constructive suggestions were for improvements which the staff had had in mind for some considerable period. He constantly made notes of all the activities and of the special characteristics of every patient, stating that he was going to write a play with the sanitarium as the setting.

In the case just cited there can be readily recognized those over-ambitious trends which may lead to irresponsible conduct, excessive expenditure of energy to the point of physical fatigue, extravagance with finances, serious conflicts with social codes and other difficulties which a too aggressive individual can readily encounter. If a reasonably early diagnosis had not been made there would no doubt have been serious complications in the proposed extended trip. The patient suffering from this phase of the mild manic-depressive reaction represents a source of danger to his family's reputation, financial status and nervous stability, while in the depressed individual the menace is to self.

Physical symptoms or objective evidences of somatic disorder are almost completely lacking in both phases of this mild reaction. The physical manifestations can be summarized in very brief form. In the over-active over stimulated phase sleep is disturbed because it is literally

crowded out by more important items The pulse rate is somewhat heightened there is an increased urinary output and weight loss occurs often due to excessive physical activity with inadequate rest and lack of attention to nutritional needs There is some exaggeration of deep tendon reflexes and general nervous hypertonus Gastrointestinal function is accelerated and visceral tension and motility are increased Henry has shown by roentgenological examinations in the psychotic phases of manic depressive that these changes occur together with an actual elevation of the viscera to a point from one to two inches higher than in the depressed phases In the retarded state insomnia occurs as a result of worrisome thoughts and a tendency to re-examine daily events to discover personal shortcomings and omissions Appetite is poor the tongue is coated the skin becomes sallow marked constipation develops In Henry's x ray studies the visceral function is shown to be so retarded that in some of the stages of melancholia the time required for passage of the barium meal into the sigmoid and rectum is delayed as long as a hundred or more hours The blood pressure often is diminished there is decreased urinary output and a general lowering of metabolism Endocrine function often is interfered with during the depressions to such a degree that in females amenorrhea of several months duration may occur The disordered endocrine physiology forming the basis for the amenorrhea is not yet understood but as the emotional state improves the menses return In a few cases studied from the endocrine standpoint disorders of thyroid pituitary and ovarian function have been detected The field is open for fruitful research

The significance of precipitating situations in the mild affective disorders often is misunderstood The patient and his family in a search for possible causes for the perplexing emotional reaction fix upon some trivial incident occurring as a coincidence with the onset of the illness and accept it as the causal factor The physician must be prepared to analyze carefully such interpretations and will profit by a careful evaluation of early personality traits of the individual under consideration It is possibly true that patients possessing a cyclothymic temperament are precipitated into an exaggeration of the constitutional trends by relatively unimportant agents This is true possibly because during the period of inefficienc the individual is rendered more vulnerable to stresses which he might during his periods of efficiency or normality resist with ease

In some instances the mood fluctuations occur with almost circular

rapidity The transitional state from a period of hyper-efficiency to a period of mild depression allows time for no normal interval In such situations the degree of loss of productiveness is serious and emphasizes the need of early diagnosis

The following case is an example of circular variety of the cyclothymic reaction A college girl of eighteen, in her freshman year, was referred to the psychiatrist by an interested teacher who felt that 'something serious had happened to her" in recent weeks The teacher had regarded the girl at the opening of the fall term as a brilliant student entering his class with a superabundance of interest and enthusiasm He had been struck by her almost inexhaustible drive for more academic knowledge her numerous requests for additional work by her statements that his course was too easy a snap , and that, if the professor intended to keep up the students' interest he would have to put more pep into the course In February four months after the opening of college he had noted her flagging interest There were several weekly papers due from her which had not been submitted She came to the instructor early in February stating that she was unable to do the required work that she had studied longer hours with less results than at any time in her life and that she felt she should drop the course because she could no longer fool the public His offers of time extensions praise for previous excellence and solicitude for her physical welfare provoked tears and the answer that she was living on her reputation that she was pretty much of a fake that she had put up a pretense and a good front' in the early part of the course She felt that she was not equal to college work though her scholastic standing at the end of her high school years had been eminently satisfactory The instructor sent the following note to the psychiatrist 'I am sending one of my most promising students to you for help She is a conscientious worker capable of superior accomplishment but seems to have something on her mind which is a burden to her and prevents her from doing her best work In fact in the past month she has produced nothing and has missed a number of classes

A brief history disclosed the fact that in her junior year and again in her senior year in high school she had been incapacitated by a vague sort of illness Her chief symptoms had been loss of appetite constipation insomnia slight loss of weight dragging feelings , inability to concentrate tendency to worry about her studies and a fear of failure Her eyes had been examined and a minor refractive error discovered

and corrected. She was removed from school for two months, placed on a laxative diet, and a diagnosis of nervous exhaustion due to overwork was made. She was able to return and finish third in her class by intensive effort. At the start of her freshman year in college she had been a most satisfactory student and had interested herself in numerous extracurricular activities. She was considered more or less the leader of the freshman women. She was exceedingly popular in her dormitory, had numerous dates, attended dances and the theater and was on the freshman field hockey team. As far as could be determined, her earliest manifestation of a cyclothymic trend occurred at the age of fourteen, when at the onset of menses she was self conscious, extremely inactive and suffered a temporary invalidism which her physician felt was quite to be expected at such a time. Her tonsils were removed and she made a gradual readjustment and was able to carry on with her class in school.

Modern psychiatry attempts to penetrate the *underlying mechanisms* of symptoms. In the management of the beginnings of the manic depressive reaction one therapeutic approach aims at the development of the patient's insight into certain of these psychopathological mechanisms. On a relatively superficial level, the phase of over activity would seem to be the acting out of a compensation for bodily inferiority. Thus a weak, undersized, awkward, unathletic and physically inferior person occupies himself during the recurrent up phases of his reaction with the boastful performance of what he considers to be great feats of physical strength and agility. Jelliffe and White express the psychopathology of the cyclothymic as follows: "It is an extroversion reaction; that is, the patient instead of turning within himself (introversion) tries to escape his difficulties (conflict) by a flight into reality. In this flight into reality, with its over activity, distractibility, acceleration of ideas and increased pressure for doing things, the patient seems to be almost at the mercy of his environment. The pressure of activity can be understood as a defense mechanism. The patient appears by his constant activity to be covering every possible avenue of approach which might by any possibility touch his sore point (complex) and so he rushes away from this possible source of danger, meanwhile keeping up a stream of diverting activities. He is at once running away from his conflict into reality and trying to defend adequately every possible approach. On the one hand, a study of the over active phase will disclose the fact that in their productions the patients re animate, so to speak, longed for

events and circumstances rather than an expression of a physiologic occurrence

It may be that predisposition and constitution, which ordinarily would have sufficed for normality, breaks, when very strongly assailed and by its nature determines a swing either toward a major or toward a minor mental illness Perhaps the distinguishing characteristic of this reactive type of depression is that the patient not only reacts to the etiologic life situation, either cumulative or catastrophic, but continues to respond during the illness to his trouble It may be said with regard to prognosis that the more reactive the emotional disturbance, that is, the more its genesis is influenced by psychogenic and environmental factors the better the outlook and the sounder the personality, the better the chance of adjustment

Dooley recognizes certain resemblances between the personalities and symptom manifestations of some manic depressive patients and those suffering from the various forms of psychoneurosis In certain of the psychoneuroses there is a tendency to remission and recurrence and frequently, if not universally an alteration of activity and elation with apathy and depression Dooley finds phobias anxiety, obsessions compulsions and somatic complaints among mild depressions She points out the compulsive content of depression or melancholia and as Freud and Abraham have stated, both compulsion neurosis and melancholia present sadistic and other psychopathological trends Some writers have gone so far as to state that compulsion neurosis arises on a manic-depressive basis

The whole important question of the relationship between the psychoneuroses and the depressions, and in a broader sense the relationship to the manic-depressive reaction, is in a very unsatisfactory state, and much more investigation and clinical observation is needed before reasonable clarity can be expected Just as the psychoneurotic, in his total reaction stands between the normal and the psychotic so is he in the flexibility of his emotional life somewhere between those two extremes In his attempts to escape the psychoneurotic has less leeway than the normal and does not have the same number of mechanisms available, but on the other hand he has a far greater range than the potential manic depressive His cohesion with reality is tenacious and is never sacrificed

The psychoanalysts have expressed the same thought somewhat differently The greater variety and mutability of symptoms shown by the

psychoneurotic then may be taken to indicate a greater mobility and range of the libido in its attempts to find satisfaction His repertoire provides a number of ways to escape or circumvent the driving sense of guilt as well as a variety of reaction formations which will give secret indulgence to repressed or tabooed drives The manic depressive has usually but two types of reaction He crams his guilt his anxiety and his censored wishes into the depth of oblivion and plunges into activity that will preclude his remembering He feels the elation of escape But this cannot last the imperfectly repressed devils rise again into subconscious memory and he punishes himself with depressions, with self destructive impulses One might fancifully say that the manic depressive libido can move only up and down in a straight line while the psychoneurotic libido moves in a number of planes Unlike the normal libido however it cannot move in all planes

It seems altogether likely that a rather large group of patients seen in practice are suffering from camouflaged depressions and are mistakenly diagnosed They may be expressed as various neurasthenic like symptoms gastrointestinal genitourinary and indeed may affect any system or function Complaints of fatigue concentration difficulties and insomnia are particularly common It is not simple to distinguish these cases from neurasthenia but it is possible to make out real depression and the fact that the patient is after all not greatly concerned about the somatic implications but more by the interference with function and the inability to carry on adequately When the history reveals other more clear-cut depressions the diagnostic situation is clearer We are then dealing with equivalents of a depression Harrowes elucidates this point as follows 'Fatigue may be an equivalent for depression Even on a still more vegetative level the longitudinal section of a case showing a frank depression may allow us to accept as equivalents previous spells of loss of weight of wakefulness of gastrointestinal retardation of indecision morning tiredness and so on Meyer states the matter as follows It is my impression that the really and frankly affective reactions whenever they occur and no matter in what form (i e in the shape of whatever equivalents such as dyspepsia fatigue insomnia) represent facts pointing to more or less specific and clear and relatively adult problems of adjustment or problems of constitutional make up mainly problems of inner adjustment without any essential distortion of the personality '

Sometimes in mild depressions the emphasis is in the fatigue and in

adequacy, and then a psychoneurosis may come into question In addition to the distinctions already mentioned the diagnostician should have in mind the recurrent nature of manic-depressive and the continuous course of the psychoneuroses particularly neurasthenia, the distinguishing over-solicitude of the neurasthenic concerning his symptoms, his eagerness to discuss them and the apparent ease with which fatigue and depression are overcome temporarily when they are under discussion the relatively closer contact of the neurotic with the environment the psychic and motor slowing of the depressed patient, the determination of potent psychogenic causes and more varied conflicts in the psychoneurotic

Management of the Beginnings of the Manic Depressive Reaction

Since it is generally accepted that the manic-depressive reaction represents the most constitutionally predisposed illness falling within the field of psychiatry it is doubly important that every effort at prevention and early treatment should be made Clinical experience seems to prove that the manic-depressive phases run their course, and that they are self-limiting diseases The modifiability of such a constitutionally predisposed disorder is the subject of intensive study from the fields of general psychiatry psychobiology endocrinology and psychoanalysis It is certainly true that depressions frequently occur without any precipitating factors and that manic attacks also appear spontaneously when it appears that everything was in the patient's favor To accept manic depressive reactions as biologically fixed paterns and therefore unproductive soil for therapeutic endeavor, is entirely too static and hopeless a point of view for modern psychiatry On the other hand in view of the pre-determination by heritage such reactions cannot be ruled out of consideration and must be borne in mind in any attempts at modification and readjustment The significance of situational circumstances as causative in certain of the reactive depressions likewise cannot be overlooked since the prognosis certainly is better in this type of affective disturbance

It is conceivable that the segment of manic-depressive which is constitutional might be subjected to constructive influences which would lower the incidence and diminish the severity of the disease through proper application of eugenics Pronounced cyclothymic personalities should be discouraged from marriage In early life just as introverted

children need to be socialized so do markedly extroverted children from whose ranks are recruited the manic depressives need to be taught reflection before going into action They need schooling in how to face the small but important situations of childhood rather than to rationalize them habitually Every effort should be be made to recognize manic-depressive in its incipiency so that prevention may be made effective by increasing the assets of the individual minimizing his liabilities and adjusting the environment

Psychotherapy can be undertaken during the mild pre psychotic attacks Often the patient is accessible enough to talk things over and while such discussions would seem to be swept away by recurring emotional depressions or elations yet they do have some survival value and are beneficial The free interval between attacks is particularly a fair target for intensive psychotherapy Here is the opportunity to re set the stage for and with the patient as it appeared before the curtain rose on the drama of his illness The patient should appreciate with the psychiatrist his relations with the environment his mistakes in handling them the defective mechanisms with which he tried to meet his difficulties and how finally, these mechanisms played him more and more false until a more severe emotional disorder offered the only possible retreat Naturally it is often necessary to go far back into the life experiences in order to find explanations from which may be constructed better defenses Hinsie has called attention to the need for intensive psychotherapy during the free interval and during the earliest (pre psychotic) manifestations of the manic depressive reaction In a small group of cases managed by intensive analytic (non Freudian) technique Hinsie s results have been encouraging and have furnished valuable data from the research standpoint There are advantages in undertaking psychotherapy in the earliest stages of the manic depressive reaction for it is obvious that we are dealing with a much less profound regression than in the psychotic There is always more of reality in the manic depressive situation than there is in schizophrenia

During the active phase of the disorder there are many situations and symptoms that expose the patient to danger A suicidal attempt may be the first clear sign of the onset of a depression since previous depressive phases may have escaped notice or have been interpreted as normal moodiness Erotic tendencies in the manic phase may lead the patient into disgraceful behavior and untold family distress and embarrassment may result from the ill advised acts of the over active aggressive

optimistic, stimulated patient. One of our patients made purchases far beyond the needs of his business, ran for a minor office in the community and was unfortunately elected after a whirlwind campaign. He then found in his normal state that he was unable to carry on with his increased assignments and was forced to resign from his office and repair the financial damage to his company, to the great disappointment and financial embarrassment of his entire family.

During the depressive phase the physician should pay strict attention to the retarded gastrointestinal function and prescribe diets and laxative measures which will tend to overcome this difficulty. Insomnia is one of the most troublesome problems both in the depressive and elated phases. The continuous tub bath with a temperature of 95° to 97° F. is a most valuable sedative in both stages and can be used with great profit. Other physiotherapeutic measures, such as hydrotherapy, ultraviolet light, massage, are all of benefit. The employment of drugs for sedation and for relief of symptoms of nervous tension and anxiety should be most cautious. Elixir of phenobarbital in dram doses, the employment of minimal doses of sodium amytal, sedormid and other of the barbital group may be sufficient to control the symptoms.

It is especially true in the earliest stages of the disorder that occupational therapy and the attempt to stabilize activity is so valuable. The drive of the manic is still amenable to control and the retardation of the depression will still respond to occupational stimulus. Wise occupational therapy is never haphazard but is a matter of careful prescription that takes into account not only the presenting phase of the disorder but also the previous personality, interests and mode of life of the patient. Since the phase of depression is recoverable, occupational therapy plays a tremendously important part in filling in the time with something of interest. It is our belief that the illness is shortened and the burden of the depression enjoyably relieved by appropriate occupational therapy. Aside from these things, it obviously tends to stimulate the flagging interest of the depressed person. It tends to prevent intense introspection and the efforts of the occupational therapist furnish the patient with evidence that someone is actually interested in and eager to help him. The personal contacts thus established furnish the bridges to helpful social relationships and often open the way for therapeutic endeavors by the psychiatrist. In the overactive phase it tends to direct the activity into useful channels, to coordinate muscle and mind and utilize the excessive drive which is always in evidence.

The analysis of the life situation of each patient suffering from the early manifestations of cyclothymic swings will lead to many clues as to avoidable stresses and strains. It is probable that the minimizing of family discord, physical handicaps, toxemias, the removal of foci of infection, can render the mood swings of considerably less magnitude. The attempt should be to level off the mood changes. Careful management will be needed to prevent the mild hypomanic from entering into commitments and activities which during the depressive phase he cannot possibly carry. The activities eagerly sought in the up phase which during the depressed phase are impossible to execute render the feelings of inadequacy and failure more severe than they might have been if the patient had been prevented from taking on too much. In other words, during the stimulated phase the patient should not be allowed to bite off more than he can chew in normality.

Attempts at total life readjustment should be comprehensive. A critical view of the patient's occupation with perhaps some help from the vocational psychologist will assist the physician to find a suitable employment where stresses are minimum. It would perhaps be unwise for a manic depressive personality to be involved in a profession such as that of stock broker or any profession where tension runs high and where the individual may be considered personally vulnerable.

Instruction to the family is most imperative. During the down swings the family should be instructed specifically to avoid all such statements as some of the following which are so commonly heard: Snap out of it, You don't half try, It's all your nerves and if you really wanted to you could be well, Why are you being so unfair to all of us and putting a burden on your poor old mother? If you don't stop this thinking about yourself you'll go crazy, or If you don't snap out of it we'll put you in the bughouse. As a matter of fact, will power and determination have very little to do with recovery from even the mildest forms of depression. The patient is uncomfortable enough so that he is making every possible effort to recover and his feeling of guilt and failure are spurs to heroic efforts at getting things done. In the up swing the application of rigid discipline, scolding, threats, inhibitions and prohibitions only serve to heighten the activity. One of our mild hypomanic patients was told by his father that he did not care what he did as long as he did not fly an aeroplane. The patient promptly borrowed a plane, flew over his father's home until the gasoline supply became exhausted and then landed in a nearby field in a minor crash.

Careful physical studies cannot be over emphasized and it is a little less than criminal to assume that because a patient suffers from a mental illness he thereby is in some magic way prevented from having a physical disease In a large neuro psychiatric clinic one of us has found that more than 50 per cent of patients, coming for help with emotional problems, possessed remediable physical handicaps which represented heavy burdens to the individual

Endocrine studies often are of great importance Hypothyroidism and the mild depressions frequently are found to be associated One of our patients, a girl of 1 dropped out of college because of academic failure, became depressed felt inadequate and unequal to facing her family and friends She was found to be 35 per cent overweight and had a basal metabolism of minus 30 per cent Adequate thyroid therapy caused her to lose twenty-one pounds and she returned to college the following year and continued successfully being graduated in creditable standing Menstrual disorders irregularities and amenorrhea, are frequently encountered A careful evaluation of the endocrine status of the patient and appropriate therapy have in our experience been of significant assistance in overcoming the psychic symptoms

Physical exercise preferably with some recreational quality should be prescribed in both phases The depressed individual often is advised by friends that his difficulties would disappear if he would work himself into exhaustion thereby working off' his problem This is no doubt somewhat exaggerated but it is true that physical and mental benefits results from judiciously prescribed physical activity In the over-active stage physical exercise of regulated character will act as a means of utilizing excessive physical energy and will prevent its diversion into unproductive and oftentimes unfortunate activities

Perhaps one of the most significant measures which can be taken in the earliest stages is a detailed schedule of activities This will tend to re direct and control the excessive energy output of the manic and will ease the burden of decision in the depressed phase The withdrawal of depressed individuals must be resisted Social activities should be promoted and made easy and simple If the physician fails to take into account the level of depression the scheduled social and occupational life may represent too high a hurdle and the patient will fail to cooperate In the manic stage scheduled activity must contain a plentiful amount of recreation or the patient will find the limitations of the prescribed life too restricting and break through all attempts at control

The manic and depressed phases may be terminated by convulsive therapy with the best results obtained in the depressions. Electroshock is preferable to metrazol because of the greater ease of administration, the lower incidence of accidents and the absence of anxious apprehension by the patient. Usually nine to twelve grand mal type of convulsions are needed for the depressed patient, but the manic phase requires up to fifteen or twenty. Reactive depressions respond as favorably as the manic-depressive reaction type. There is no real evidence to show that future attacks of manic-depressive psychosis are prevented by electroshock therapy.[5]

Prolonged narcosis from three to six weeks may be quite useful, particularly in some of the manic reactions. Sodium amytal in gradually increasing doses has been found most satisfactory to do the job of effecting sleep for twenty to twenty-two hours per day, utilizing the waking hours for general hygienic and nursing care.

Prefrontal lobotomy has been used by Freeman and Watts[6] and many others more often in the chronically depressed and agitated patient than in the manic. Insufficient time has elapsed to evaluate properly the outcome of psychosurgery, but some promising results have been reported. Thus far we have reserved its use for the chronically ill psychotic who has had the benefit of sufficient convulsive therapy and whose care has been very difficult and burdensome.

INVOLUTIONAL MELANCHOLIA

There has been some discussion as to whether involutional melancholia represents a separate entity or whether it should be grouped with the manic-depressive reactions and be regarded as a depressed phase of that constitutional disorder. Henderson and Gillespie[1] feel that it has features of its own, separate and distinct from manic-depressive reactions. It is our feeling also that involutional melancholia is a specific psychiatric entity, since the whole life history of these individuals, their personality development and reactions to their environments all have a classic similarity. For further discussion of involutional melancholia see Vol. VII, Chapt. IX.

Involutional melancholia is a psychosis occurring during the physiological epoch common to men and women known as the involutional period, "change of life" or climacteric. It is especially important in the present day that the physician recognize the earliest manifestations in

the inception of this illness, since during the past five years new and highly specific therapeutic weapons have been provided in the form of glandular extracts It is possible by prompt and judicious use of endocrine products to reduce the physiological stresses of this period and turn the tide toward mental equilibrium Certain psychological factors are present in every individual during the involutional phase which tend to constrict the sphere of life and produce mental trends which are not constructive The mind tends to turn toward retrospection preoccupation with might have beens Early dreams and desires cannot now be fulfilled the zenith of life is passed ambition and life forces are waning and the opportunity no longer exists for correcting old errors Doubt indecision fear and anxiety readily become evident Glands of internal secretion begin to manifest the maladjustment which is classical of the menopause and physiological stress is added to the psychological factors

As the involutional period approaches there are a few warning signs of impending danger The patient becomes cautious of new friends withdraws somewhat and constricts his social life even more severely than is his custom The full blown involutional melancholia is characterized by anxiety agitation depressive and nihilistic delusions ideas of sin strong self accusatory trends apprehensions delusions of poverty and death and not uncommonly somatic delusions The disorder is seriously disabling of long duration and the prognosis is unfavorable in about 50 per cent of cases It has been found in a study of prognosis that about half recover in the first year about 8 per cent in the second year and [illegible] per cent in the third year of the illness

Early Personality Traits

The life long personality of the potential involutional melancholia patient can perhaps be characterized most completely and accurately by the single word rigidity The personality is also inclined to be stubborn penurious opposed to change self sacrificing and in many ways may be regarded as psychologically masochistic Throughout life there has been a strong unbending relentless conscience It is axiomatic in psychiatry that the involutional melancholia patient who suffers so acutely from feelings of guilt self-accusation and the ideas of sin, is the very person whose life has been most exemplary in both ethical and

moral conduct The lack of freedom flexibility proper outlets and recreation and the inability to experience pleasure from vacations and play weaken the individual and deprive him of the supports which he needs during the stresses of the involutional phase

We feel that the same mechanism producing the intense feeling of guilt and sense of wrongdoing is the rigid conscience ever present throughout the life of the individual which has prevented him from entering into those activities offering mental relaxation and which would free him from the narrowest confines of absolute propriety In other words it seems that the added stresses of the involutional period in some way release or activate repressed yearnings and long cherished hopes which can now never be realized These impulses toward natural and normal outlets which are at variance with the strict puritanical self denial of the personality give rise to conflict For this type of personality the impulse to violate rigid moral and ethical codes is almost as painful to contemplate and as sinful as the actual commission of the act The person is usually hyper religious an ardent churchgoer a sincere believer a bulwark of righteousness one who would and does constantly sacrifice himself for a righteous cause This type of personality has been described as the inhibited variety with a tendency to overconscientiousness compulsiveness rigidity with an absence of humor Diversions have been lacking and life has been cramped and stereotyped The man usually is a loyal subordinate meticulously accurate in detail who makes adjustments to new situations and circumstances with great difficulty Jealousies are strong but expression of them is repressed and he suffers in silence A wife will often complain that he always kept his troubles to himself

The following case presents the typical personality characteristics of the pre involutional make up The early symptoms are replete with forebodings of approaching mental chaos and clues to therapeutic approaches which might have effectively altered the course of the illness The patient age 4? was brought to the hospital suffering from crying spells insomnia profound depression agitation anorexia and weight loss The history shows that the patient left school at 16 to help support a widowed mother She worked hard was conscientious restricted her social life in order that her mother might be provided with her company and the entertainment which she could furnish Friends described her as self sacrificing and self effacing to a fault She was an ardent church worker and sacrificed many hours of her own time to work for foreign

missions, taught a Sunday School class and was scrupulous about the religous instruction given to the children At 21 she met a young man, who proposed marriage, but she felt that she could not desert her mother Acute conflicts assailed her and she was torn between the conviction on the one hand that it was her right and privilege to be independent, to live her own life, and on the other the ever present duty of conscientious devotion and solicitude for her mother's welfare She states that she solved the conflict by resigning her life to the service of her mother and her church At 28 after the sudden death of her mother, she married a widower with two children There were two children born to her, and her aim in the home was to make the lives of these children and step children happy and free from the usual conflict and stress arising from such a family situation She constantly interposed herself between the various factions and usually succeeded in bringing about peace, but at some cost to her own comfort and peace of mind Thrift was strongly ingrained in her and she saved carefully from her husband's meager salary so that her children might be provided with the educational advantages which she had been denied

At 44 she developed eye trouble and feared for a time that blindness might develop She became fretful and worrisome visited many eye specialists but no serious ophthalmological condition could be detected There were complaints of pressure behind her eyes burning sensations and a feeling as if her eyes were protruding and prominent She became mildly apprehensive about the welfare of the children, waited up for them each night became somewhat irritable with their adolescent interests, felt that they were too much on the loose and that the younger generation was influencing her family in destructive ways She blamed herself for not teaching her children the right principles was constantly anxious lest they over step certain moral limitations questioned her daughter ruthlessly about her moral conduct and felt that she should not be permitted to attend dances unchaperoned She began to suffer from insomnia complained of gastric distress and was studied carefully in one of the hospital clinics for gall bladder disease but none was detected

Her periods remained regular until she was 46 then became scanty and finally stopped three months before admission to the hospital She developed itching sensations in the skin suffered from headache nervous tension, throbbing in her head and ears complained of hot flashes and excessive perspiration Fear of 'nervous breakdown' terrified her,

and she gradually lost interest in her family eliminated her few social contacts and her church work Two months before admission she developed the idea that she had in some way defrauded the foreign mission service and that she would ultimately be found out and punished She scanned the evening papers to see if the horrible story of her disgrace had been published She became intolerant of any disturbing noises paced the floor and gradually developed the typical picture of involutional melancholia

The Early Symptoms of Impending Involutional Melancholia

It is not difficult to see in the illustrative case how the characteristic symptoms of involutional melancholia are the natural outgrowths or exaggerations of previous personality traits The somatic chemical and psychogenic influences of this epoch are instrumental in producing a *gradual sapping of the resistance against mental disease* This would seem to be verified by the fact that the psyche has been able to withstand assault and maintain its integrity for four or five decades If there is a flaw it is readily found in the many liabilities intrinsic and extrinsic of the climacteric The outstanding features are irritability heightened intolerance feelings of pressure and compulsion fatigability insomnia anxious depression and feelings of inadequacy Fear dominates the patient's mind and he hesitates to reveal to even his closest friends his insecurity and anxiety

On the one hand somatic integrity is threatened by circulatory endocrine pelvic and other morbidity on the other hand there are apt to be at this time discouragements resulting from reverses disappointments deaths and family worries The development of hypochondriacal trends is an early warning sign of impending danger There is preoccupation with physical discomforts strange sensations unnatural feelings pressure in the head tight sensations about the chest pelvic congestion and genital irritation Restlessness becomes more marked and impulsive anger and suspicious trends are not uncommon Interest is withdrawn from external objects an egoism is heightened Satisfaction in life disappears and contemplation of death is substituted Certain physical changes are in evidence increased pulse flushing of the face blood pressure increase (menopausal hypertension) indigestion loss of appetite constipation and loss of weight The picture becomes increasingly hypochondriacal or neurasthenic in character

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extensively and great advances have been made in the past decade. Many of the symptoms formerly regarded as psychogenic in origin appear to be related to the glandular maladjustments of this period. The incidence of symptoms of one sort or another in menopausal women is very high. Of 1,000 menopausal females studied by the Council of the Medical Women's Federation in England (Hoffman[11]) 84.1 per cent showed definitely troublesome manifestations. In only 10 per cent were the symptoms incapacitating.

It has been demonstrated that at the height of the female physiological menopause estrogenic substance may disappear from the urine and blood stream. Frank[5] states that in 50 per cent of these women the content of gonadotropic factor in the blood is greatly increased and may reach a quantitative level equal to 500 rat units per liter in contrast to the maximum norm in the cyclic female of 5 rat units per liter. Frank and his associates have detected also appreciable amounts of estrogenic substance in the urine of castrates and menopausal women. This is probably due to estrogenic substances derived from some extra-ovarian source, probably the adrenal cortex (Hoffman[11]). In 1923 Allen and Doisy published their specific test for the qualitative and quantitative determination of these substances.

Attempts have been made to show that fluctuations in the secretion of estrogenic substances are related to the notable vasomotor instability, hot flashes. The structural changes of thickening of the ovarian capsule and failure of rupture of the follicles result in the failure of estrogen and progestin production, but the gonadotropic hormone content of the pituitary and body fluids is increased at this time. In other words, the ovary regresses but the supply of anterior pituitary sex hormones continues. What develops in the climacteric period is a progressive refractoriness of the ovaries to pituitary stimulation. However, the exact mechanism for the vasomotor manifestations is still obscure, although it has been definitely established that some relationship exists between the endocrine and vegetative systems. Also there is no adequate explanation of the fact that some women experience menopausal symptoms months or years before or after the cessation of menses. Typical manifestations have been observed coincidental with either high or low estrogen levels.

The menstrual flow also is extremely variable. Meigs states that the onset of the menopause is heralded by numerous changes in the menses. A complete cessation may occur; periods may become shorter and

The psychopathological process may be described somewhat as follows. The wish for death, which is the epitome of complete loss of interest in the objective world, meets with resistance on the part of the ego, and the individual is caught in desperate conflict between his suicidal impulses and his strong consciousness of the moral wrong of such an act and the obligations to others. Formerly well repressed instinctual urges and hidden complexes surge forward as the patient's power to repress is gradually weakened. There is a strong sadistic component which becomes evident in the patient's statements: 'My thoughts are horrible. I am afraid I will do something terrible to someone.' The anxiety is increased as the individual's ability to repress these instincts is worn down. Jelliffe and White express the nature of melancholia as follows: "Painful depression, abrogation of interest in the outer world, loss of capacity to love and inhibition of effort are common to melancholia. Observation shows that the abuse which the melancholic heaps upon himself, represents complaints directed against a person he formerly loved. The mechanism is as follows: As a result of some disappointment or injury to his love he has withdrawn it from its object, but instead of transferring it to a new object as is the normal mechanism, or introverting it on to unconscious fantasies as does the neurotic, or applying it to the ego as does the paraphrenic, he replaces it by a narcissistic identification of the self with the former object. The libido is withdrawn from the object, and the object is built up within the ego itself, that is, it is projected upon the ego. The explanation of this mechanism is that it probably represents regression to the original narcissistic way in which he fell in love. The ego thus becomes split, and one part, to which consciousness adheres, can thus criticize, hate and abuse the other part formed by a fusion with the idea of the object, in other words, one part of the ego can treat the other part as the object. Three conditions seem to be necessary for this outcome. First, an acute loss as in grief, though the loss is more often due to disappointment than to death; secondly, the combination of a strong narcissistic fixation on the loved object with a lack of resistance to its investment; and thirdly, a marked ambivalency as in the obsessional neurosis."

Physiological Factors

The physiological and endocrine stresses which both male and female persons suffer during the involutional period have been studied

should attend to the organic factors but also should give advice and counsel concerning social environmental handicaps and should penetrate the minds of the patients at least deeply enough to discover and uproot any erroneous conception concerning the likelihood of the development of mental disease. Every woman should be psychologically prepared for the menopause and the traditional ideas concerning its threat to the mind should be vigorously combatted. The physician should make a careful evaluation of inherited organic, psychic and environmental flaws in each patient. From such evaluations will come sensible preventive measures and safeguards. The involutional period requires strategic handling, particularly since suicide is a constant threat even in the earliest period of involutional nervous instability, and tactful vigilance must never be relaxed.

The long interest and focus of energies upon child bearing and rearing of the children has now come to a close, and new interests and activities must be substituted. Not in every case can the solicitude and care for maturing children be easily relinquished. The parental attitude of the individual tending to develop involutional melancholia usually has been too protective with a strong inclination to excessive domination. Too frequently there have been inculcated in the children the same rigorous self discipline and self denial, the same inordinately high ethical and moral standards, which now overtake and endanger the declining years of the patient. The anxious care sometimes intrudes into the lives of the maturing youth, and rebellion, almost invariably misunderstood by the parent, results. Apparent rejection of the parent by the children is thus added to the already heavy burden of disappointment, despondency and regret characteristic of the involutional period. Some insight should be given into the normal psychology of adolescent or maturing children. Very frequently unnecessary stresses are brought into parents' lives in the early involutional period because of their misunderstanding of the normal psychological processes of maturing. The intelligent physician will help parents to understand the normal rebellion against parental authority and to see that too rigid and ruthless tactics in crushing this rebellion can result badly, not only for the child but also can produce untold needless mental anguish for the parent.

Compensations and substitutions for the former solicitude directed toward the family must now be sought. It will tax the ingenuity of the practitioner to overcome the rapidly constricting sphere of interest and to generate enthusiasm for women's clubs, political interests, various

gradually stop and a widening of the intermenstrual intervals is not uncommon The belief that menstrual irregularities, such as bleeding between periods or too much bleeding at periods occur normally as an accompaniment of the menopause is very dangerous In all such instances investigation to rule out cancer or other organic disease in the genital organs is imperative The nervous manifestations may not be severe but their presence is practically always certain

In the male involutional changes occur at a somewhat later period in life than in the female The average male climacteric occupies the decade from fifty to sixty years of age The existence of a male climacteric has been seriously questioned because of the failure to provide objective evidence by endocrine studies and the failures to effect relief of symptoms by hormonal preparations However Heller and Myers[1] reported in 1944 their findings of pronounced elevation of gonadotropic hormone excretion comparable to the quantities produced by castrates This was corroborated in eight cases subjected to biopsy by histological evidence of testicular atrophy and degeneration The diagnosis was further supported by the treatment of twenty cases with androgens The authors felt they could distinguish between the climacteric and psychoneurotic symptoms by urine gonadotropic assays definitely elevated in the climacteric and normal in the psychoneurotic They also stated that the male climacteric is a relatively rare syndrome (contrast this with the relatively frequent syndrome in females)

In the male climacteric changes in sexual drive are almost certain to occur Sometimes libido is greatly increased at other times impotence develops Both endocrine and psychic causes seem to be involved The fear of sexual failure as the involutional period approaches is an almost universal one The magnification of sexual interest whether due to real increase in libido or to psychic compensations for impotence produces in the typical 'pre-involutional melancholia' personality tremendous conflicts and feelings of guilt from which derive self depreciation self accusation and heroic efforts to repress the objectionable thoughts

Treatment

Treatment of the Prodromal Stages – From the standpoint of prophylaxis it should be emphasized that there is a mental as well as a physical aspect to the hygiene of the climacteric Physicians who under take treatment of patients who are at this critical life epoch not only

supply an estrogen deficiency indefinitely but rather to avoid an abrupt withdrawal of the estrogens so that endocrine balance will be easier. The results reported following the use of estrogens vary considerably. Novak[11] has found the results variable, rarely brilliant, but often satisfactory. Davis[11] reports that estrogen treatment gives moderate relief to a majority and no relief to a considerable number. Hoffman[11] states that general medical measures, reassurance, sedation and sterile saline injections used for psychotherapeutic effect have proved more efficacious than the estrogens or other hormonal preparations in the vast majority of cases.

The dosage of estrogens recommended is 10 000 I U of estradiol benzoate given subcutaneously three times a week. In stubborn cases 100 000 I U may be used and the dosage is reduced gradually until maintenance doses of stilbesterol orally 0 5, 1 0 mgm daily are sufficient. The potential dangers of estrogen therapy are its possible carcinogenic effect and the fact that the menopause is also the cancer age, so that curettage should be seriously considered in cases where uterine bleeding occurs.

Severinghaus[4] treated 95 women suffering from menopausal disturbances of varying degrees of severity and he feels that the use of adequate amounts of estrogenic substances definitely shortens the course of the disturbances. He believes that oral therapy is now so dependable that it may replace completely hypodermic administration. He cites re establishment of the menstrual flow after the menopause and undue increase of libido as contra indications to the further use of the estrogenic substance.

The following case will serve to illustrate the highly specific effects of endocrine therapy. A woman of 48 was brought to the hospital in a state of impending acute agitation. The history contained abundant data to show the characteristic inhibited, highly repressive, pre involutional melancholia personality. The menstrual periods had become scanty and irregular at 46 and at 47, seven months before admission, there had been an amenorrhea of three months duration. This was accompanied by intense vasomotor symptoms with hot flashes occurring as often as thirty or forty times a day. Somatic symptoms were prominent in the form of pressure sensations as if the top of the head were being pried off. There were tight sensations in the occipital region and epigastric distress with frequent gaseous eructations. Mentally there were strong compulsions to do violent harm to members of her family and to scream

hobbies, organized recreations and other occupational therapy. The patients should be helped to see that now, when the imperative need for close supervision of children is no longer necessary, they have unusual opportunities to carry out long cherished wishes for personal satisfaction. Hobbies can be indulged in, riding, travel, interest in the arts and crafts can be utilized. It is essential, when the process of isolation has begun during the involutional period, to draw up a formal schedule of activities and plan a campaign against the increasing egocentricity and contraction of the patient's life.

A frank discussion of the sex problems arising at this time can be extremely helpful but must be managed with the utmost diplomacy. Direct inquiry into sex relationships and sexual adjustments will do great harm. The patient should be allowed to raise the subject for frank discussion. It is a most common conviction among both men and women that the menopause marks the end of sexual interest and the termination of sexual gratification. Abundant evidence shows that this is not the case. Sex interest may decline gradually during the late forties and fifties but the simple cessation of the menstrual cycle does not mean sudden withdrawal of sex interest from life nor abrupt senile atrophy of the pelvic organs. It is often true that opportunities for real companionship between husband and wife become possible at this age. The children have grown up, are in college or in homes of their own, and life can be made very full by a minimum of planning.

The general management of patients during this period also calls for long rest periods, for regulated exercise, dietary control to combat constipation and sometimes small doses of sedative drugs. Careful gynecological or genitourinary examinations should be made to rule out actual organic pathology. Occupational therapy, either in the form of hobbies undertaken independently or as formal instruction in the arts and crafts, cannot be over emphasized as a stabilizing factor in the early period of involutional instability.

Endocrine therapy is of the utmost importance to re-establish the glandular balance. It may be possible to alleviate the physiological stresses of the menopause so that subsequent tension, fear and anxiety never reach the point of even partially disabling the patient. Estrogenic substances have been employed for the control of symptoms since there is a failure in production of these substances. However, with the improved laboratory procedures the use of estrogen therapy should be tried only where a deficiency has been determined. The aim is not to

supply an estrogen deficiency indefinitely but rather to avoid an abrupt withdrawal of the estrogens so that endocrine balance will be easier The results reported following the use of estrogens vary considerably Novak[11] has found the results variable rarely brilliant but often satisfactory Davis[11] reports that estrogen treatment gives moderate relief to a majority and no relief to a considerable number Hoffman[11] states that general medical measures reassurance sedation and sterile saline injections used for psychotherapeutic effect have proved more efficacious than the estrogens or other hormonal preparations in the vast majority of cases

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out obscene words Remorse at these terrifying urges was enormous She paced the floor her facial expression was one of apprehension her hands were in constant motion and she repeated in a wailing voice Daddy did it why can't I (suicide) Estrogenic therapy was begun in the form of 300 rat units of theelin every third day given intramuscularly Frequent small doses of sedative were given by mouth, and hypnotic drugs were prescribed at night During the first two weeks she was unable to cooperate with the usual hospital routine of massage hydrotherapy ultraviolet exposure occupational therapy and regulated physical exercise The patient was necessarily isolated under the close supervision of nurses On the twenty second day she was transferred to the convalescent ward was well enough to play cards walk about the grounds and take the prescribed physiotherapy She became interested in tapestry weaving and was able to work out her own design and choose her materials Hot flashes and sensations of tension and pressure were markedly relieved On the thirty fourth day she was discharged accompanied by her nurse and her husband and went to a seashore resort Four weeks after her discharge from the hospital the nurse was allowed to leave the case and the patient appeared to have made a complete recovery On her return home she failed to report to her physician to continue the hormone therapy and the general supervisory measures which had been prescribed After nine weeks at home without treatment, she was again returned to the hospital in a state of agitation, having attempted suicide by jumping out of a second story window Hot flashes had returned restless anxiety and strange subjective feelings were prominent Estrogenic therapy was begun again and after three weeks the patient was able to return to her home Symptoms had disappeared and she apparently was making a very satisfactory readjustment The injections of estrogenic substance were continued at less frequent intervals for ten months and finally were withheld altogether The symptoms are completely controlled now by small mouth doses of estrogenic substance

Mazer and others[7] have demonstrated that an increase in libido does occur in castrated women and sometimes after menopause during the treatment with estrogenic substances Growth of the mammary glands has been established as an occasional effect of the treatment There are as far as can be determined at the present time no harmful effects from large doses of the estrogenic principle other than those referred to

Allen[8] has shown that there is a definite increase in vascularity and

size of the cervix and a noticeable growth of the mammary glands as accompaniments of this treatment for the alleviation of the usual subjective menopause symptoms. Severinghaus[8] finds that hormone therapy in the early involutional states is extremely useful for a transitional period until a compensatory endocrine balance is reached. He finds that small doses which are insufficient to produce menstruation or to increase libido may be effective for relief of vasomotor and mental symptoms. He recommends a dosage of from 50 to 400 rat units of hormone daily by mouth.

Glandular therapy in the male involutional period has been used extensively but the therapeutic efforts must for the present remain in the speculative stage. Testosterone propionate 5 mgm by intramuscular injection three times weekly is the usual recommended dose. Werner[11] reported 4 out of 6 cases benefited by relief of symptoms and a sense of well being.

In view of the very poor prognosis in involutional melancholia without specific therapy it is gratifying to have such splendid reports of good results with the use of electroshock therapy. The selective field for convulsive therapy is involutional melancholia. Usually ten to twelve convulsions are necessary for a full course but the patients generally show some improvement after the first five or six so that the danger of suicide has been overcome and the management of the patient is considerably eased. Figures of from 70 to 90 per cent recoveries are constantly being reported (Sargent and Slater[17]).

Treatment begun early in the illness will give more satisfactory results with fewer convulsions and the rehabilitation of the patient to his former social and economic status is more easily accomplished. Early treatment removes the dangers of suicide, exhaustion and intercurrent disease so frequently encountered in these agitated and depressed patients. The outlook is less favorable when there is a strong paranoid coloring in the symptomatology.

Prefrontal lobotomy has found its best field of usefulness in the involutional depressions. In fact some report better results with psychosurgery than convulsive therapy. However it is our policy first to try an adequate course of convulsions and even repeat the course after a sufficient interval before recommending lobotomy. We observe the following rather rigid criteria concerning lobotomy: a duration of the psychosis for more than one year, unquestionable chronicity, absence of cardiovascular and other contraindications to neurosurgery, failure of all

other methods of therapy or the presence of an exceedingly severe symptomatology with a strongly moving apprehensive-depressive content so that the life of the patient is extremely burdensome and the care of the patient unsatisfactory

Psychotherapy must be undertaken with extreme caution The therapeutic attack must be varied taking into account the psychological make up and background of the individual and the serious physiological maladjustments which accompany the menopause A good rapport and patient attention to the individual's many troubles will give considerable relief and may allow the patient to dissipate enormous emotional pressure which otherwise would call for intensive efforts at suppression It is our feeling that any psychoanalytical treatment or deep psychopathological interpretations of the patient's sadistic or masochistic impulses must be strictly avoided There is no more dangerous psychiatric situation than that encountered in a case of impending involutional melancholia It is wise to keep the therapeutic management on a commonsense level

Schizophrenia

It is not at all difficult to visualize the overwhelming importance of the early recognition and prompt treatment of that serious psychotic maladaptation which is called schizophrenia Socially and economically it is a more serious problem than either tuberculosis or cancer There are twice as many hospital cases of schizophrenia as of tuberculosis Each year not less than 30 000 to 40 000 individuals, soon after adolescence or in the first flush of manhood or womanhood fall victims to this condition Annually 75 000 new patients are admitted to state hospitals and at least one fourth are schizophrenics Unless an adjustment is accomplished during the incipient and early stages they are condemned to a veritable living death devoid of emotional life as others savor it and barred from participation in the normal activities and affairs of living Schizophrenia is discussed also in Vol VII, Chapt VIII

Early Personality Traits

Any attempt in the direction of the early recognition of schizophrenia must begin with schizophrenic potentialities and therefore it cannot escape a critical survey of the childhood of those individuals who have

become chronic victims of the psychosis Only in this way can dangerous potentialities be recognized evaluated and treated In the histories of a great majority of schizophrenics such adjectives as quiet shy' reserved , cold diffident different unsociable seclusive and the like often recur If one should attempt in a few words to give a social cross section of these individuals before they became psychotic it might be fair to say that they did not meet the realities of their environments satisfactorily and that this maladaptation was manifested *comparatively early in childhood* *The brunt of the personality deviation* falls not on the intellectual but on the emotional make up More often than otherwise these children are intellectually bright enough indeed they often excel academically However even in the child various factors such as disinclination for competition and even a shrinking away from it inferiority feelings or boredom with routine may condition interests in non curricular subjects like astronomy philosophy psychology or even bizarre fields like astrology Naturally when this occurs normal academic progress is hindered Perhaps the keynote of the child s personality is a shrinking from reality These children are non competitive It is not that the fruits of competition are not desired They may be longed for but the realistic endeavor that is needed to obtain them is difficult and is disliked The child is not social certainly not in the usual sense of play contacts with other children and the free masonry that exists among them in their play world Usually the athletic interests are not predominant at least there is not the strong drive to win that is so common in the average boy Some of the earliest symptoms of schizophrenia appear quite imperceptibly and in ways which seem altogether normal if not praiseworthy in the adolescent child For instance there may be such socially acceptable behavior as a quiet demeanor absence of boisterousness unfailing courtesy toward adults and a desire to listen attentively to adult discussions Any growing tendency to reject contacts with other children and a preference for adult companionship or failing this an increasing drift in the direction of aloofness reticence and isolation should be regarded with suspicion In regard to sex these youngsters are not insulated as is often supposed since they may be excessively modest They are frequently fascinated by the subject but accept beautiful explanations and phantasy all too readily and elaborate them while matter of fact explanations are not so easily assimilated It is fair to say that from the standpoint of the expenditure of physical energy the potentially schizophrenic child puts forth far

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the other The introvert is inclined to be cold apparently gloomy un sociable and rather inactive Their feelings are seemingly not strong and they do not express them readily They are not the executives who get things done but the planners and theorists They are inclined to be visionaries

Each of us is more predominantly one or the other of these types but most of us have elements of both The extroverts get things done they are executives the men of the world the sociable and cheerful people The introverts are those who supply innovations and plan for the future From the lack of sociability and from their detachment introverts see more clearly problems and solutions which never occur to the extroverts The introverts are the dreamers and inventors Many of the greatest discoveries have been made by them Both types de veloped to the extreme are equally useless and harmful the extrovert in senseless over activity and the introvert in aimless phantasy

There is much similarity between the introvert and the conception of the schizoid of Bleuler and Kretschmer Bleuler[3] writes of the schizoid as follows The schizoid retains his independence toward his surround ings he strives to withdraw from the affective influences of the living as well as the dead environment and to pursue his own aims In patho logical states this may develop into active hostile or passive dereistic* (de reor away from reality) attitudes and in milder forms it still leads to a seclusion from reality or to an active transformation of it for one s own aims or to an adjustment to reality by means of inventions The schizoid person may be persecuted or litigious but he seeks and always finds new paths and outlets The lack of respect for reality and for existing things leads on the one side to an effort to change them some how and on the other hand to turn in to oneself In contrast to the syntonic (extrovert) who has the ability and will to live through his reactions to outer influences and thus settle them the schizoid can keep them from discharging thus saving the motive power for later times and then add to it the feelings tending in the same direction He thus not only saves force but time and opportunity for reflection and modi fications of past inner and outer circumstances

The schizoid is not in himself mentally abnormal Thus the expres sion *schizoid* now designates a type of psychic being and psychic re action which exists in everyone more or less pronounced in its morbid

* It is characteristic of this dereistic thinking that it totally ignores any contradiction with reality

less energy than other children During these "quiet" times and in many other situations such as in the school room, the attention wanders and there is wool gathering and day dreaming It is normal, of course for every child to indulge in day dreaming and phantasy formation but when it occupies a very large segment of the child's daily life, when the proffers of reality are not particularly desired and the transition back from day dreaming is somewhat difficult for the child then the day dreaming is attaining dangerous proportions In childhood Henderson particularly emphasizes bed wetting fears, ruminations undue sensitiveness and bashfullness

Kraepelin[1] has described four types of character make up as predisposing to schizophrenia (1) The quiet, shy, retiring disposition making no friendships and living only for himself (2) The irritable sensitive excitable nervous self willed type with a tendency to bigotry (3) A smaller group who from childhood up are restless lazy dislike work are inclined to nasty tricks do not persevere in anything and become vagrants or criminals (4) In contrast to these are children, who are conspicuous for their docility good nature, anxiety to please conscientiousness and diligence and as patterns of goodness hold themselves aloof from all childish naughtiness Kunkel[2] names these types the *autistic*, the *unstable* the *asocial* and the *pedantic*, respectively He thinks their traits are to be regarded as early manifestations of the disease and so places the beginnings of schizophrenia very early in life In sharp contrast to these latent periods schizophrenia occasionally develops with great suddenness After some emotional shock the patient may become immediately greatly confused or catatonic

Later Personality Traits

The quiet, shy sensitive day dreaming often excessively modest child not infrequently develops an adult type of personality which since it is the antithesis of the social energetic type or extrovert is called introvert

The person, who tends to be a thinker rather than a doer is apt to be an introvert Introvertism means the turning in of the mind or self on to its own problems The introvert gets his chief pleasure from within himself the extrovert from without The kingdom of the mind and thought or the external world are their respective spheres Thought is pale non vital, unreal to the one Action is irrelevant or valueless to

provide a critical time for careful management There are changes in the reproductive apparatus and endocrine system There is an acceleration of growth and an increase of strength The voice changes there is a growth of hair on the face especially in boys and there is the growth of pubic hair There is clumsiness in the use of the arms legs feet and hands and a consequent self consciousness and self awareness There are new hormones thrown into the circulation which unquestionably in their stimulation of physical changes also bring about physical sensations which are new and mysterious In the cases of girls the reproductive changes are constantly borne in upon consciousness call attention to new phases of human conduct modify the relations to others and give new significance to familiar situations and acts Periodical physiological changes often misunderstood and associated with mystery or misinformation are often given an unnatural setting increase self-awareness and profoundly modify the mass of organic sensation heretofore constituting the nucleus of self-consciousness (Hollingworth[1])

Hoskins[1] commenting on the endocrine factors writes The hormones may also play a part as predisposing causes in establishing a defective milieu The hormones have a primary influence upon brain and body development They seemingly exert throughout life a crucial regulatory influence upon both brain and body and they may even play a part as a direct factor in affectivity Interest attaches to the relationship between deviations in personality which are the essence of the psychoses superficially considered and the hormones It is probable that had the psychology of the hormones been investigated as searchingly as have the physiology and the functional pathology we should now recognize that the endocrinopathies are characterized by quite as marked repercussions in the personality as in the organic functions Despite many a notable gap in our knowledge it is safe then to say that the hormones contribute importantly to the determination of the personality Hence the conclusion can scarcely be escaped that they significantly influence those aberrations of personality that make up the psychoses According to Carlson If the conditions of nervous instability or latent nervous disorders are present in man it seem highly probable that the marked disturbances particularly of the thyroid gland of the anterior hypophysis of the parathyroids and of the gonads may be contributory factors in intensifying or actually releasing the phenomena It seems to be generally accepted that in schizophrenia there is a general hypo-metabolism

aggravation it manifests itself as schizophrenia but in its milder development it is seen in the psychopath hitherto designated as schizoid without however reaching to the degree of being called a psychotic" (Bleuler) Nevertheless the roots of schizophrenia are firmly imbedded in schizoid soil

The person who is schizoid to a dangerous degree does not find the world a pleasant place in which to live He does not successfully meet reality and his sensitive nature shrinks from the slings and arrows of outrageous fortune Secretly he probably envies success in the abstract, but he hesitates to take the real concrete steps which make for this enviable state With the dexterity of thought which he possesses he clothes everything in garments of idealism Sex is beautiful, but its actual physical contacts are not pleasant in his mind Success in any field is desirable but competition is distasteful to him Unquestionably there is always in his mental life the conflict between the desire to grasp the fruits of endeavor in every phase of life and the shrinking from the bold and positive efforts that must be made before the victory is secured Without doubt sooner or later he comes to the crossroads of his mental life, and there must be some decision as to which path he will tread Shall he continues the hard battle of facing reality or may he take the easier road Already he has succumbed to the temptation of excessive day dreaming It is unreal but pleasing In this way all the hard knocks of reality are made to disappear and his hurts are soothed

The schizoid however, has great capacity for introspection Thought is at once his greatest security and his greatest danger One may picture the potential schizophrenic at this stage as courting unreality in his day dreams If his ultimate fate is to be schizophrenia he loses some small part of his hold on reality almost day by day Finally comes the time when judged by the criterion of the world as applied to himself the verdict of failure is inescapable His ego still strong cannot accept the conclusion that he did not succeed because in truth he could not face the struggle that is necessary

Potential Physical Characteristics

We must speak with far less authority concerning potential physical marks While of course the somatic changes of adolescence are not restricted to the introverted youngster yet it is precisely the combination of these rather rapid physical alterations and introversion that may

as becoming evident in school evidenced by flagging attention The adept teacher recognizes the period of oncoming fatigue by marked increase in mistakes and flagging attention School anxiety particularly in starting new work is to be carefully studied either as a sign of fatigue or as a physiological negativism to which fatigue has given birth as its corrective Changes in mood are of much moment, sudden rudeness excessive sluggishness irritability and peevishness, quarrelsomeness These often indicate more than the normal amount of fatigue, and they are often the precursors of frank mental tire There may be the development of a neurasthenic-like state with wandering of attention and difficulty in controlling phantasy There is often a subjective feeling of loneliness with a paradoxical refusal of companionship The patient may take long walks and if interrogated is apt to become irritable and say that he wants to be left alone so that he can think Masturbation and the conflicts engendered by it are often prominent in the field of consciousness A previously excessive interest in the occult begins to merge into a delusional state There is apt to be the development of reference ideas and there may be a display of negativism or self sufficiency The earliest symptoms may be perhaps understood in terms of a beginning withdrawal from reality the preoccupation with phantasies and day dreams with the result that there is a progressive diminution of voluntary attention and long periods of abstraction Thinking is at a very shallow level and becomes dilapidated The interests and energies of the patient are occupied with things that are not accessible to the casual examiner

Treatment of the Potentialities and Beginnings of Schizophrenia

The therapy of the beginnings of schizophrenia may be conveniently discussed under several headings

A *General Internal Medicine*

Elimination Careful dietetic and tonic routine Endocrine therapy Removal of infection and proper treatment of any accompanying morbidity

B *Early Psychological Treatment with a Preventive Aspect*

Studies in childhood psychopathology Mental hygiene in school Preparation for problems of adolescence of emancipation from home sex hygiene etc Organized state wide neuropsychiatric

Attempts to delineate a predisposed physical habitus have not been entirely unsuccessful There is a clear biological affinity between the psychic disposition of the Schizophrenic and the bodily disposition characteristics of the asthenics athletics and certain dysplastics' (Kretschmer[6]) Raphael and his co-workers report from careful study of schizophrenics that a rather definite type-trend of soma obtains differing in its nature strikingly from that occurring in manic-depressive material The body organization on the whole tends toward the linear cast of habitus with a relatively small narrow face and head and a long narrow shallow and less capacious type of trunk" The fingers are long and tapering the costal angle is acute, the chest is long and narrow, and the extremities tend to be long Lewis reports cardiac and circulatory aplasia Gibbs[8] emphasizes abnormal hair distribution, "vertical pubic hair and hair on face and elsewhere being frequent in his female patients and a horizontal distribution of hair often with scanty hair in the beard area, being common in males Abnormalities in the texture of the hair, nails and in size and consistency of the testes has been reported more commonly in schizophrenia than in any other mental disorder'

During the incubation and incipiency of schizophrenia more attention should be paid to certain phenomena which according to various authorities Langfeldt Malamud Rothschild Trentzch including ourselves, occur fairly frequently in the full blown psychosis, low pressure, cyanoses localized sweatings edemas absence of psychic pupillary response, increase in salivation vagatonia sympathicotonia, headache gastrointestinal upsets vertiginous and epileptiform attacks impaired nutrition, tuberculous tendencies low basal metabolic rates a high bromide distribution ratio between blood and spinal fluid defective neurocirculatory response etc

Early Symptoms of Schizophrenia (Pre dementia Praecox)

We have attempted to fill in the psychological and somatic background against which the schizophrenic stage is set There is still a period of time during which the patient is scarcely considered abnormal by those who are in contact with him, though they may bring him to the physician for some disturbance of the nutritional state or "slight" behavior difficulty This is often the prodromal stage of schizophrenia Jelliffe[9] has called attention to the fatigue real or apparent as an early sign in the prodromal stage of schizophrenia He mentions it particularly

The prophylactic objective should be to strive for a more even balance between individual and environment or in some degree exteriorize or socialize him

For the child the home should be first and foremost a place in which there is an atmosphere of harmony and happiness There should be neither unduly harsh discipline nor its opposite spoiling Competition between brothers and sisters in the home for the favor of the parents particularly when spurred on by playing favorites" by the parents is pernicious The attempt to stimulate a child by too constantly pointing *out the assets in brothers or sisters usually results in the production of* inferiority feelings and is a hazardous process There should be liberal doses of explanation to the child in the parent child relationship and particularly should punishment contain a generous leaven of explanation Companionship with other children of both sexes outdoor athletics and all reasonable socializing influences should be encouraged Here if utilized wisely there is a great deal of value in such organized movements as the Boy and Girl Scouts summer camps organized sports etc It should be made easy for the child to bring his or her playmates into the home and there should be no risk that things would be seen or heard there that would shame the child before other children Divorce seems to be a necessary evil of modern civilization but it certainly does twist the personality of children and particularly of those children who have introverted tendencies Sex and particularly the concrete facts of sex are always difficult for the potential schizophrenic and therefore effort should be made to prevent phantasy by supplying competent knowledge of sex hygiene and to discourage rumination by always discussing such matters without emotion and with only a modicum of moralization Sex instruction should be begun comparatively early in childhood but naturally in a degree and in detail suitable to the age of the child

Children have toward their parents an attitude of idealistic identification Unconsciously they supplement their own weakness by identifying themselves in the parents Here is a strong emotional bond leading to indiscriminate imitation and containing sources of danger particularly for the introverted child The goal of any real psychology of childhood is to obtain for the child a true psychological maturity If this is not accomplished the child is destined for a life of slavish imitation of those who become the emotional surrogates for the parents The parent child bond must be loosened not too abruptly, but, nevertheless surely and

examination of school children showing behavior difficulties and of all school failures with prompt treatment, as well as out patient studies of pre psychotic individuals

C *Reconstruction Therapy*

In the pre-psychotic stages and in the incipiency a frank discussion of the patient's problems, liabilities and assets (personality resources) and the situation he has to meet in life Establishment of an adequate personality in keeping with the resources Development of reconstructive interests of diverse types, of insight and understanding Occupational therapy to produce action and maintain contact with reality, leading to the selection of satisfactory vocational endeavors

Schizophrenia once it begins becomes all too early and all too soon a fixed and chronic psychotic maladaptation and it is therefore highly important that the prophylactic and early treatment opportunities be intensively cultivated Such opportunities occur strikingly during childhood and less emphatically but still definitely enough, in early adult life So far, no specific pharmacological endocrine, or other physical approach has been derived from pathology Nevertheless, early and thorough examination along physical lines consistently followed by the indicated therapy is well worth while Each patient is a problem in internal medicine Any associated organic morbidity of importance even though is does not seem to be even remotely connected with the psychosis should be thoroughly treated Each real focus of infection should be eradicated Usually the patient is below par and by the utilizing of every reasonable measure, rest exercise diet and tonics he should be raised to his physical optimum There are commonly gastrointestinal disturbances including chronic constipation which should be vigorously combated Always there should be a thorough attempt to solve the endocrine puzzle Lewis and Davies Kauders Mayer Simkins, Hayward and Woods have all reported favorable results with glandular therapy Hoskins and Sleeper found a large segment of patients had thyroid deficiency and obtained encouraging results by an exhibition of thyroid extract

Psychological and Environmental Therapy —Much of the potential success of the early psychological treatment lies in the possibility of modifying the personality variously described as introverted 'seclusive', schizoid , etc upon which schizophrenia is so readily engrafted

The prophylactic objective should be to strive for a more even balance between individual and environment or in some degree exteriorize or socialize him

For the child the home should be first and foremost a place in which there is an atmosphere of harmony and happiness There should be neither unduly harsh discipline nor its opposite spoiling Competition between brothers and sisters in the home for the favor of the parents particularly when spurred on by "playing favorites" by the parents is pernicious The attempt to stimulate a child by too constantly pointing out the assets in brothers or sisters usually results in the production of inferiority feelings and is a hazardous process There should be liberal doses of explanation to the child in the parent-child relationship and *particularly should punishment contain a generous leaven of explanation* Companionship with other children of both sexes outdoor athletics and all reasonable socializing influences should be encouraged Here if utilized wisely there is a great deal of value in such organized movements as the Boy and Girl Scouts summer camps organized sports etc It should be made easy for the child to bring his or her playmates into the home and there should be no risk that things would be seen or heard there that would shame the child before other children Divorce seems to be a necessary evil of modern civilization but it certainly does twist the personality of children and particularly of those children who have introverted tendencies Sex and particularly the concrete facts of sex are always difficult for the potential schizophrenic and therefore effort should be made to prevent phantasy by supplying competent knowledge of sex hygiene *and to discourage rumination by always discussing such* matters without emotion and with only a modicum of moralization' Sex instruction should be begun comparatively early in childhood but naturally in a degree and in detail suitable to the age of the child

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independence of thought and action must be wisely and continuously encouraged.

Jelliffe and White[1] state: "The endeavor to modify the environment of an early schizophrenic must be guided by what has been found as a result of psychoanalysis. The schizophrenic splitting goes back to early infantile situations, the time when the love of the child was given out in its entirety to the immediate members of the household. Later on, if the child is to become an efficient adult, he must emancipate himself from the thralldom of this affection. This is what the schizophrenic has not been able to do, and the affection which binds him to his infantile loves is quite truly felt as a destructive force that prevents his onward progress in the world."

Introverted children read a great deal, and while their reading should not be too rigidly ordered, yet it should be directed toward types of literature that are not too luridly and completely phantastic. Religion supplies an important need, and it should be a source of beauty and inspiration but social and practical too, and above all not grimly fear-producing. Religious anxiety and hyper conscientiousness are to be guarded against.

Every category of the child's life should be carefully examined and investigated in a painstaking manner. Detailed history should be available from parents regarding birth, early development, walking, talking, teething, bowel and bladder training, sleep habits, etc. There should be a careful evaluation of personality trends, an analysis of the family relationships, position of the child in the family group, habits of play and the economic stress to which the family has been subjected. These are all of the greatest importance. In the largest sense a personality disorder might be said to represent an attempt at adjustment to the environment. The school records should be carefully evaluated, and particularly should all overt behavior be studied in detail in a search for motivation. It not rarely happens that the first evidence of serious mental conflict is found in an unexplainable overt act. The past medical history often yields a great deal of valuable data regarding the origins of asocial trends.

Even such usual childhood experiences as illness and accident may affect the child's attitude toward life. Thom[11] writes: "These changes in personality are usually of short duration, yet there is danger of undesirable traits becoming firmly fixed during this period. The period of convalescence is extremely hazardous. The day arrives when the child

is forced to leave the omnipotent state into which his illness has precipitated him and he must again assume certain obligations Children who are sick or convalescing are entitled to special consideration They are more easily annoyed and irritated and are less stable emotionally more likely to be unduly sensitive and easily hurt yet one must not lose sight of the fact that the most difficult part for the child who is going through this stage of rehabilitation is that of giving up the special privileges seeing them fade away one by one of losing his position of supremacy and power and the feeling of importance that went with it There is a real conflict between the desire on the one hand to get well enter again into competition and take up his old responsibilities on the other hand the temptation to assume a passivity which will allow him to indulge in the protection that illness gives Illness may furnish the child with an opportunity for laying down responsibility and children often learn how headaches vomiting various kinds of physical complaints create undue concern and we find them capitalizing these symptoms either consciously or unconsciously

"The schooling of these children should be carefully scanned and means found to check the tendency to study abstruse and obscure subjects Rather should socializing subjects be emphasized that youth may keep close to facts and maintain friendly personal contacts Primacy in competition of intellects is a goal to be disparaged The choice and any change of occupation should be given consideration by those interested in order to prevent the development of illness and any inclination to choose a vocation that merely promises compensation for ill recognized inferiority feelings should be skillfully handled The vocations selected should be certainly within the capacity of the individual and of a type to maintain his social life on as broad a scale as may be within his power (Hamilton[1]) In the pre psychotic stage of schizophrenia and the management of its beginnings occupational therapy is a valuable adjunct *The attempt to coordinate hand and mind the sufficient intricacy* of the occupation and the growth and completion of the product are all representations of the reality which the patient is in danger of rejecting

These are but a few of the conceptions that may be utilized advantageously in the attempt to prevent the development of schizophrenia and to treat it in its incipiency not only in children but even later in life in those ingrowing personalities who are in danger of this chronic maladjustment

Obviously, the earlier the actual schizophrenia is treated correctly, the better the chance of adjustment We have estimated from our record that while there is an excellent chance for adjustment in the first few months of the psychosis this chance rapidly diminishes so that all too soon it is less than two per cent

In combating schizophrenia in its beginnings, the psychiatrist needs the inspiration of a workable conception We know of no better conception than the psycho biological interpretation of Meyer[13] It views the patient critically in the long section of his life history and particularly surveys the series of maladaptations that preceded the final schizophrenic one It then asks such pertinent and therapeutically stimulating questions as these What are the resources of the patient What has he to react with What is the situation in life he is called on to meet? Can we modify his resources in order to enable him better to meet the situation or can we modify the situation so that he can better meet it with his resources etc Finally the psychobiological idea does not court exclusively any single therapeutic mistress and it leaves open the door of every reasonable treatment plan

We feel that it would be advantageous to present a typical case of hebephrenic schizophrenia viewed from the vantage ground of the long section psychobiological viewpoint

Personal History—Normal birth and development She showed the same oddities in childhood as later in life She had the usual childhood diseases She had a severe attack of influenza in 1918 Her school history was one of many changes From an early age she showed poor adjustment as illustrated in the accompanying life chart She has been working in a hosiery factory with practically no advancement Her work was very tedious and monotonous She was over stimulated by her associates who referred to her as an old maid since she was extremely prudish and the girls enjoyed teasing her and talking continuously about sex topics This was always a source of great annoyance Her habits were normal regarding eating and sleeping She practiced self-abuse during the past few years

Personality Make up and Situation—Patient has been very seclusive and reserved from childhood She has always been over attached to her father and despite her long hours of work in the factory has waited on him day and night since his stroke (see life chart) Her older brothers have never contributed anything to the support of the family, and she was imposed upon at an early age by the other members of the family

Typical Case of hebephrenic schizophrenia with characteristic symptomatology. Rapid deterioration. Mental hygiene hints obtained from study of case. K. I. female, [illegible] years. Single. Factory Worker.

Life Chart (Strecker & Ebaugh[14])

	Year	
	[illegible]	[illegible]
	[illegible]	Walked [illegible] talked [illegible]
	[illegible]	
Whooping cough	[illegible]	[illegible] father [illegible] mother [illegible] family
Measles	[illegible]	[illegible] Began school [illegible] After [illegible]
	[illegible]	[illegible] trouble with lessons. [illegible] interest [illegible] classmates. Child [illegible]
		[illegible]
	[illegible]	
	[illegible]	Mother died. [illegible] worried. Took [illegible] out [illegible] School [illegible] school (Father [illegible])
	[illegible]	[illegible] school work. [illegible] School [illegible]
	[illegible]	[illegible] Began [illegible] hosiery mill [illegible] Thought [illegible] should be [illegible] [illegible] these girls [illegible]
Swollen [illegible] neck. Much [illegible]		Only [illegible] Attended lecture [illegible] on self abuse [illegible]
	[illegible]	[illegible] There [illegible] [illegible] 7:00 A.M. [illegible] P.M. [illegible] week
Influenza	[illegible]	[illegible] Helpless. [illegible] bathed [illegible]
Illness [illegible]	[illegible]	[illegible] [illegible] other [illegible] [illegible] refused. Case withdrawn. Began to feel best [illegible] was [illegible]
Mental [illegible] Psychopathic Hospital [illegible] Almshouse [illegible] Hospital [illegible]	[illegible]	
	[illegible]	Worked [illegible] [illegible] matters [illegible]

She has always been very much disturbed over sex problems, especially since she heard a lecture on self abuse several years ago. Patient felt inferior to the other girls and reacted very poorly to teasing. She had a constant feeling of "being tortured" in her work. She showed an inability to mix with people from an early age (see life chart) and was inclined to daydream excessively.

Physical Examination.—Patient was markedly undernourished, being twenty pounds under weight. There was a diffuse acneform eruption over the face and back. Examination of all the systems was normal. Blood pressure was low, 100/70. Urine examination was negative. Blood chemistry negative. Red blood corpuscles, 4,600,000. Hemoglobin, 75%. White blood corpuscles, 9,240. Normal differential. Spinal fluid examination was negative.

Onset of Present Illness.—Began September 19, 192-, after a visit to a dentist's office. She talked irrelevantly. She felt that the dentist was in love with her and that he had some influence over her. "He made me do things." She became careless of her personal appearance and very untidy, at times exposing herself. Later she began hearing voices which made her confess onanism, which had been a source of worry to her for a long time. She felt that people on the street were talking about her, claiming that she was a bad girl. The girls in the factory disturbed her in various ways. She imagined that she must be making people crazy. She had prolonged periods of laughing and smiling to herself and at other times was depressed. Relatives said that she threatened suicide. A week previous to admission the patient became very agitated following a court proceeding against her older brothers for support of their invalid father. At one time she felt that she was facing death but stated that she was willing to die in order to "leave some pleasure in the world and to "save the world." Voices asked her if she had intercourse with men and referred to other sex topics. She complained of seeing different animals, especially a dragon. She became very religious, insisting on going to church for long periods, attending confession, etc. She felt that she should change her religion. There has been a gradual decline in her physical condition since onset of present illness.

Mental Examination. General Behavior.—On admission the patient showed many oddities of behavior. She frequently smiled and laughed to herself. She was impulsive, antagonistic and resistive, at times abusive to those around her whom she accused of torturing her in various ways.

Stream of Activity and Talk.—Her talk was extremely irrelevant. At one time she spoke of the Catholics and Jews being "against her" and said that she had to die. Spoke about electricity, self-abuse, various religious events. At these times she assumed an attitude of prayer, moving her lips inaudibly, never however showing any waxy flexibility.

Mood and Special Preoccupation.—*Affect*.—Inadequate and apathetic.

She showed a tendency to laugh and be silly when asked about her father's condition

Ideas of Reference.—People talk about me and point to me on the street and say that I am a bad girl. This has been going on for two years. At times she had an idea that her food had been tampered with and something put in it in order to make her sexually excited.

Auditory hallucinations were present. She heard voices that accused her of self abuse and told her that she must die. At times she reacted to visual hallucinations stating that she had seen a dragon which on close questioning she associated with the feeling of death. Ideas of influence were present. The patient felt that she was under the control of electricity and also under a mental spell due to telepathy and thought waves.

Sensorium and Intellectual Resources.—Sensorium could not be tested adequately. However, the patient was oriented regarding time and place. She recognized the examiner as a physician. Her memory showed no defect. She was able to describe in fair sequence different events of her past life. Retention, grasp of general information and calculation could not be tested owing to the patient's agitation. No insight into her condition. She thinks that there is "nothing wrong" with her mind and she should be discharged at once.

Course in the Hospital.—The course in the hospital was one of progressive deterioration. She became increasingly careless of her personal appearance and later refused to go to the toilet. She was sloppy in her habits at the table, frequently eating with her fingers. She became increasingly delusional about the ward doctors, thought that they were tempting her in various ways and felt that she was under their influence through mental suggestion which caused her to masturbate shamelessly during the day as well as at night. She continued to smile and laugh to herself. She occasionally attacked the other patients without provocation. She did not react well to hydrotherapy. Committed after two months observation. Physically she improved after course of sodium cacodylate, general tonic measures and relief from constipation. A tonsillectomy also was performed.

Discussion.—The discussion of this typical case of schizophrenia may be limited to the following: *1.* What indication was there in her early life that the patient might develop a psychosis? *2.* What means were there then at our disposal to prevent this psychosis?

The life chart shows the following. At the age of four (formative

period) the patient was in a turbulent home environment At the age of six she was afraid of her teacher, very apprehensive and showed an inability to mix and thereby avoided reality At the age of ten she showed an inadequate emotional reaction following her mother's death At the age of fourteen she did not meet the problems of adolescence adequately, with the onset of menstruation she imagined that she was dying from tuberculosis and later she shunned all sex topics The next few years of the patient's life were characterized by teasing in the factory masturbation worries conflicts and over-stimulation along sex lines chiefly due to her factory associates and environment A lecture heard at church Self-abuse Causes Insanity, resulted in increased conflict At the age of 2- her father had a stroke, and it was necessary for her to wait on him morning and night in addition to her factory work She also had a severe attack of influenza at this time At the age of -5 the patient filed a complaint in court against her ne'er-do-well brothers but help was refused After visiting a dentist she developed various delusions hallucinations, ideas of influence and behavior oddities as noted in the history

Could these pre psychotic trends have been recognized and relieved through early and prompt treatment?

Examination of this child at a pre school age could have led to a better habit training and possibly have prevented the formation of a seclusive and shut-in type of personality Certainly this step is logical and the increasing statistics from Out-Patient Departments and Children's Guidance Clinics prove that this has been done helpfully in a number of pre school and adolescent children A study of our patient during the period of adolescence certainly could have resulted in instilling better ideas concerning menstruation and sex hygiene She thereby would have reacted better to teasing and would not have been forced to over compensations by being prudish and withdrawing from contact on the basis of her mental conflicts and repression Instead of a lecture stating that self abuse causes insanity, perhaps a careful talk regarding the physiology of the reproductive organs and the phenomena of masturbation would have prevented any further withdrawal from contact and would have led to sublimation and better adjustment to her environment with real happiness and efficiency In further consideration of this case fatigue and a weakened physical condition play important roles The improvement of the home situation is an example of one of our very important social needs and it is now being met by welfare agencies

Psychotherapy—There are many kinds of psychotherapy and we believe the more individualistic the approach the better Generally speaking, the psychiatrist will find his patient living on the plane of unreality or dangerously close to it Between this and the reality which is possible for the patient and which varies for each patient there is a gulf which must be bridged if adjustment is to be secured The steps between phantasy and reality cannot be forced too abruptly but must be taken psychologically speaking slowly and gradually The building up of confidence persuasion suggestion that skillfully and not too obviously puts forth the claims of reality are all helpful All this implies some degree of accessibility on the part of the patient but so is this requisite for any form of psychotherapy and in the bulk of early cases some degree of accessibility is at hand Once a bit of insight is secured and there is some beginning of the process of viewing the symptoms objectively, then this advantage should be pressed and expanded

There is much difference of opinion concerning that specialized form of psychotherapy known as psychoanalysis in the early treatment of schizophrenia Some authorities feel that dangerous panics result from the inability of the patient to face the probably incestuous significance of the phantasies and that the physician becomes a part of the phantasy Others think that this is merely a difficult place in the treatment plan and that it can be won through It is obvious that in any event psychoanalysis must be modified if it is to be used in the treatment of the schizophrenic For one thing in the reported cases more than four hundred hours of interviews were needed for each patient

Somatic Methods in the Treatment of Schizophrenia—Insulin hypoglycemic therapy is the treatment of choice in schizophrenia, but other somatic methods are used and have a definite place in the psychiatric armamentarium The latter include electroshock combined insulin and electroshock prolonged narcosis and prefrontal lobotomy Recently electronarcosis [2] has been reported to give good results but not better than the other methods

Reliable statistics [3] after ten years of insulin treatment would generally indicate the remarkable value of this treatment in schizophrenia Four hundred patients treated in Swiss hospitals before 1937 showed 59 per cent of complete or social remissions In the New York State hospitals 1 000 cases showed 11 1 per cent recovered 26 5 per cent greatly improved and 26 per cent improved the corresponding figures in a control group of 1 000 untreated cases were 3 5 per cent 11 per cent

and 7 4 per cent The treatment also greatly shortens the duration of the illness Whether these recovered patients will remain well is not known as yet but even relapsed cases show a tendency to make good recoveries after another course of insulin

Insulin shock therapy is a specialized procedure, requiring study and experience, and must be administered by trained therapists in an adequately equipped hospital An adequate course consists of between thirty to fifty insulin comas

Convulsive therapy in the beginning was considered on a par with insulin but follow-up reports show the results to be no better than spontaneous recovery rates However, acutely excited catatonic states and depressions in schizophrenia can be improved definitely by convulsive treatment, so that it has some usefulness in mental hospital management As a consequence combined electroshock and insulin has been used, giving the convulsion while the patient is in the mild shock stage of insulin hypoglycemia or giving insulin shock and electroshock on alternating days "The highest recovery rate in any large and varied group of cases initially diagnosed as schizophrenia will be achieved when insulin and convulsive therapy are skilfully combined in differing proportions in each case based on the actual symptomatology shown" (Sargent and Slater[9]) In a certain number of schizophrenics, chiefly the catatonic reactions prolonged narcosis is helpful

Finally, in a small group of carefully selected patients the operation of prefrontal lobotomy produces remarkably good results Between September 1936 and June 1945 Freeman and Watts performed lobotomy on 126 schizophrenics and reported 46 good results and 31 fair results with a mortality of per cent

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CHAPTER II

THE PSYCHIATRY OF CHILDHOOD

By Gerald Pearson

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Introduction

It is very important that the physician understand psychiatric disorders in childhood particularly those which manifest themselves by neurotic disturbances of physiological function or by social scholastic and familial maladjustments In the first place they are extremely common though not often recognized and in the second place in the history of every case of adult psychoneuroses psychogenic psychoses and character defect there appears invariably the record of a similar condition in childhood which passed unrecognized

Had adequate therapy been applied then there is every reason to believe that many of these later and often intractible, adult illnesses could have been prevented or at least greatly ameliorated

The psychiatry of childhood includes a consideration of the social and intellectual disturbances resulting from organic disease of the brain the social disturbances resulting from differences in brain development and the disturbances in the physiological and social behavior which result from emotional conflicts These socio psychological problems in many ways resemble similar problems of adults but there are certain striking differences

1 There is a difference in relative frequencies Organic brain diseases are less common in childhood than in adult life Differences in intelligence cause more difficulties in adjustment among children than they do among adults Disturbances of physiological function and marked deviations of social behavior are more common in children while the more definite neuroses and psychoses are more common among adults

2 Disturbances arising from emotional conflicts are more common in childhood because the child on account of his weakness and dependence is less free to act as he likes and so often is caught in an intolerable situation from which he cannot escape as an adult would by change of environment

3 Adult emotional problems as do those of adolescence, usually arise from within the structure of the personality Those of childhood may arise either as the result of difficulties with the persons in the environment and this is particularly true before the sixth or seventh years, or as internal difficulties depending on the age and stage of development of the personality, as the structure of the personality is different during the early years from what it later becomes

It is necessary to discuss the dynamic structure and development of the personality as an introduction to the study of its deviations The adult personality consists of three parts

I The instinctual desires innate and universal and classified broadly into two groups 1 Those that tend to preserve life the anabolic or erotic instincts, including the sexual and the self preservative 2 Those that tend to destroy life, the katabolic instincts or Todestrieb

Instincts are the driving force behind life and the integration of the physical organism and the energy produced by that integrated organism is arranged to supply them with the means of accomplishing their purposes Every instinct has a source an energy charge an aim and an object The source is not known but probably is certain chemical changes in the organs which cause the instincts to be liberated in a rhythmical manner regardless of external stimuli although such stimuli cause an alteration in the rate of production The liberation of the instinct is associated with the production of energy for its use

This production of energy causes an internal tension until it is liberated in use so that the aim broadly speaking of the instinct is the use and dissipation of this energy charge with the resultant relief of tension and pain and attainment of pleasure pain being used here to designate a state of tension pleasure to designate a tensionless state Although this is the general aim of all instincts each instinct has a specific aim depending on the source and nature of the instinct The object of the instinct is any person or thing by which the aim of the instinct can be obtained Instincts are innate chemical forces within the individual which are not governed by the laws of time reason or morals whose aim must be obtained at all costs and regardless of all obstacles and whose associated energy must be used and dissipated Neither their production nor the production of their associated energy charge can be prevented only their aim and object can be altered There is no difference between the instinctual portion of the personality of the child and the adult

*B These blind forces must be under some control in order that their aims may be accomplished in the world in an efficient manner and in order that one instinct may not interfere with another This controlling force is known as the ego The ego is not present at birth except potentially but comes into being through the individual s experiences Its function is to enable the grati*fication of the instinctual needs in accordance with the real possibilities for such gratification in the real external world i e to direct the individual toward situations where his instinctual needs can be gratified and to avoid those situations where gratification cannot be obtained or would be dangerous One may be very thirsty the ego can direct the individual toward water but if the water is marked poison and the ego recognizes that poison is dangerous it will direct the individual away from it

C Man requires other controls than those in relation to the real physical world He is a social animal and living in groups he has had to erect barriers of customs and manners in order that he and the other members of the group may survive each other s presence This accumulated body of customs and mores is handed down from parent to child and therefore is not innate in the individual but rather quickly becomes an integral part of an individual s psychic structure and may be designated as the conscience or superego Its purpose is the control of the instinctual life so that gratification may be obtained only in accordance with the social mores and customs of the group in which the individual lives There is then within each human being a conflict between the internal blind unreasoning instinctual urges struggling for and demanding expression on the one hand and on the other the permissive and restrictive demands of the ego and the superego If the world is a reasonable one *the ego can permit complete* satisfactory and non-dangerous liberation of the instincts *If the superego is reasonable in relation to the real needs of*

society, it can allow complete and satisfactory liberation But if the real world or the superego is unreasonable, and such liberation is not permitted, the instinctual energy accumulates, demands release and conflict results, terminating in release either along avenues deleterious to the individual, who pays a toll to the superego in illness for such release, or deleterious to society which exacts toll for delinquency Seldom are the restrictions of the real world sufficient to cause an adult conflict, usually the conflict arises from the restrictions of an unreasonable superego, the results of unwise training in childhood

The adult psychic personality consists of these three parts 1 the instincts, 2 the ego, 3 the superego or conscience The child at birth only has part 1 of this structure and consequently during the development of his psychic apparatus his conflicts will differ in their sources from those that occur when the psychic apparatus is fully developed In the first period of life, between birth and six or seven years, the conflicts are partly between the instincts and the parents this conflict gradually changing its direction toward the end of this period into a conflict between the instincts and the internalized parental training, the superego During the second period, that from six or seven to puberty (about ten or eleven years), the conflict is mostly between the instincts and the superego although the actual parents continue to contribute their share After puberty the conflict becomes the adult one between the instincts and the superego

Psychopathology

Problem behavior in childhood whether of the nature of physiological dysfunction neuroses psychoses etc or of the nature of social dysfunction, actual behavior problems delinquency etc represents an attempt at a solution of a conflict and a study of a case necessitates an attempt to determine the sources of the conflict On the one hand there lie the child s instinctual desires which are necessary unchangeable and irrepressible on the other some definite, and in problem cases actually unnecessary interference with the gratification of these desires This interference may result from the behavior of some adult actually in the situation or from the child s own intrapsychic control mechanisms, a too severe superego In the latter case the child s previous upbringing must be studied because it is from this that the over severe superego emanated As elsewhere in medicine therapy to be of value must be directed at the source of the conflict rather than at its results the symptoms Therefore, by and large in the first case therapy will be directed toward the parents or guardians in the second toward an attempt to alter the severity of the intra psychic interference This does not apply to true delinquency where the

intrapsychic structure has not followed the ordinary lines of development but this will be discussed in its appropriate section

Emotional conflicts of all types are the result of the individual s inability to gratify his instinctual desires These desires, if ungratified manifest them selves first as anxiety i e the individual behaves and feels as if he were in the presence of a danger and his clinical symptoms both physical and mental are those of fear This anxiety therefore appears when the individual child or adult, finds himself trapped between two opposing forces an increase of unrelieved instinctual tension and a fear that he will not have the opportunity to relieve the tension or if he attempts to do so, something terrible will happen There are three types of this anxiety each of which represents a stage in the child s development The first is seen when the infant is hungry and is not fed immediately He screams cries squirms kicks giving the appearance of fighting desperately to overcome the internal feeling which threatens to over come him He seems terribly frightened by this feeling and in the slightly older child this feeling is associated with the thought that perhaps the person who can relieve the feeling i e the mother will not come to his rescue His feeling is one of being overwhelmed by all powerful inner tensions, and he fears that if his mother does not come to his aid i e, if she deserts him he really will be overwhelmed The second is an outgrowth of the first and is seen in the child of two or three when he is confronted by a desire to do something of which his mother disapproves He wishes to do this thing to relieve his inner tension but he thinks that if he does she will cease to love him and consequently desert him His feeling is again one of inner tension but he fears lest he lose his mother s love and all its associated benefits The third is seen in the four or five year-old Here again there is a desire to relieve instinctual tension in some way that he knows is not approved He fears to do as he wishes lest he be physically punished and hurt the type of punishment being often a horribly brutal one constructed out of the power of his own anger and fury when someone does something that displeases him He may fear death at the hands of very kind gentle parents simply because when someone angers him he has the desire to kill and he attributes similar ideas to his parents

This state of tension with the fear associated with it which is seen clinically as anxiety is an exceedingly uncomfortable state and the child as soon as possible attempts to change it to a state that is more tolerable, i e he develops symptoms These symptoms are of three groups first, a limitation of the activity which seems to produce the fear state second, the projection of the cause of the fear onto an external object which the child can then avoid, third the release of the instinctual energy through other formerly permissible channels either social or physiological and at the same time inflicting upon himself a punishment for such release

Any of these methods temporarily reduces the feeling of fear and makes the child's life more tolerable for the time being although increasing the intolerability in the long run As stated earlier, the interferences arise either from the impossibility of gratifying the instinctual desires in reality, or because the child dares not gratify them either because of the suppressive attitude of the parents or of their attributes which the child has made part of himself, i e, his superego Everyone has a superego, but in most people it does not cause illness because it behaves in accordance with the facts of the real world In those cases where it has become over suppressive and unreasonable, it has done so because of one of two factors or from a combination of them These two factors are first the parents attitude to the child, second, the actual events of the child's life

It is easy to see where a too-restrictive attitude of the parents will result in a too restrictive superego The little boy with a very severe father has to govern every act and every thought (because the young child believes that the adult can read his mind), on the principle not whether the thought or act is really unacceptable but whether it will produce his father's displeasure and will result in the father casting him out, not loving him any more, or severely, perhaps fatally punishing him As a consequence when the severe father becomes part of the child's personality he must continue to serve the cruel taskmaster rather than the real circumstances of his life If the parent has not been over severe generally but has been restrictive along special lines, most commonly in regard to the child's sexual life, a similar difficulty develops If a parent cannot tolerate nudity in the child, and long before the child has developed to the point where he begins to care whether he is clothed or not punishes this aspect of the child's behavior severely, the child may come to regard nudity or its associated manifestations, i e the pleasure of standing in front of an audience acting, bathing on a public beach, etc, as the most deadly crime and when this becomes part of his superego he feels shame embarrassment and self consciousness if he is called on to stand and recite in school, take part in a play or go to the seashore The parent of course, usually cannot see the connection between the child's behavior and the earlier training and often reproves or punishes the child again for not doing the thing for which the child feels he once was punished

It is important to recognize that not only does over severity produce difficulties of development but over indulgence operates in exactly the same way The little boy with a too indulgent father loves that father very much There are times however when the father consciously or unwittingly restricts him This arouses anger against the father, which the child dare not express because he loves the father too much He has to behave as if he were not angry and the more often this is necessary the more his aggressive feelings are suppressed,

and the more dangerous they feel to the child Consequently the child has to erect very quickly a severe part of his superego to keep those dangerous impulses in check A vicious circle begins because the more they are kept in check the more dangerous they become Thus for the boy a too severe or a too indulgent father becomes a difficulty in development and results in the erection of too severe superego which results either in a neurosis or a character defect For the little girl the mother's attitude becomes the determining one

The actual events of the child's life are also important in determining the type of superego Every child suffers under and governs his life on the basis of three fears desertion by his parents loss of love and bodily injury If one of these fears comes true i e if a parent dies or deserts or does not love the child then the child's fear comes true and he makes the connection that what he was doing at the time of the event has caused the result This is the familiar thinking of cause and effect because of coincidence found in primitive man and in children In order to prevent such a happening recurring the child develops a portion of his superego over severe against his activities or thoughts of this time and if such thoughts or actions are the bearers of instinctual energy then that outlet for the energy becomes permanently closed even though such an outlet is eminently desirable The birth of a new brother or sister often means to the child a withdrawal of the parent's love from him and again the thoughts and acts of this time may have to be suppressed rigorously lest further love be lost It is a truism to say that the child flourishes and develops normally in an atmosphere of love but that when such an atmosphere is lacking disturbances of behavior will result Disturbances of development expressing themselves either in character defects neurotic symptoms or behavior disturbance result to a greater or lesser degree from too restrictive or too indulgent parents of the same sex as the child from the death desertion or long absence of either or both parents during early childhood or from the parental rejection of the child either a real rejection or a fantasied one because of the birth of another child Other events of life go into the formation of an unreasonable superego One of the principles of the psychic development of the child is that the early infantile pleasures must be permitted over a certain period of time and if this optimum period is shortened the child reacts by a chronic feeling of disappointment and an attempt even at the expense of his development to get later the pleasure of which he has been deprived If the optimum period is prolonged the change to the next period becomes increasingly difficult although the prolongation of the period is not as disastrous as its curtailment Such a curtailment leaves the individual with the yearning to try to get pleasure in that particular infantile way This in most instances as he gets older he cannot do but the constant yearning causes the erection of a severe superego structure against his yearning which reduces the energy

available for the rest of his life weakens his ability to adjust to life's difficulties and causes a constant liability to be drawn backward to this form of pleasure, which can only be obtained through neurotic symptoms

The first pleasure activity in the child's life is that of sucking There is abundant proof that the little baby sucks not only because he is hungry, but also because he obtains a pleasurable feeling in his oral cavity Associated with this pleasure is the feeling of comfort, warmth, etc, obtained from lying in his mother's arms and against her breast It is probably the greater gratification of these two desires which makes the breast fed baby happier and more tractable than one who is bottle fed as the latter gets much less of the feeling of closeness to the mother It is the cessation of this pleasure at the time of weaning which underlies the anxiety symptoms fretfulness, crying and sleeplessness which all infants show to a greater or lesser degree at this time If the period of breast feeding is curtailed there is a tendency for the child to try to continue his sucking pleasure longer by the adoption of longer continued finger sucking etc and for certain character traits, a chronic feeling of being cheated extreme envy of other's happiness and chronic irritability, to develop There are clear indications that the lack of the optimum period of breast feeding not only interferes with the child's smooth physical progress but with his psychological progress also

The second pleasure activity of the young child is in his bowel and urinary activities Every child resents the training in cleanliness If it is performed too stringently or too early the child may succumb to the training but at the same time hide rather than dissipate his resentment An over severe superego is developed both against dirtiness and against resentment, so that for the future the individual is unable to get himself acceptably dirty in play, unclean work such as gardening etc and is unable to resent any act of a superior even though that resentment might show itself simply as an attempt to be a more successful person

The third pleasure activity is masturbation Although parents may shut their eyes to its presence masturbation is universal in children between two and six It has no injurious effect and is as normal a phase of development as sucking was in the first year Parents and other adults not understanding this, are often upset by it and endeavor to stop it drastically Such an attempt, if successful, results in a serious hindrance to the child's development Many parents worry about it through ignorance and if their ignorance is removed, can let it pass unnoticed Those who refuse to accept its normality or try to stop it even after enlightenment have had a serious masturbation problem in childhood themselves and may even in adult life be in conflict as to whether to indulge themselves in this way Their attitude is well illustrated by the mother who brought her eighteen month-old daughter because the child was

masturbating being firmly convinced that unless the act were stopped the little girl would become a prostitute Such an attitude reveals something seriously wrong with the parent's own life Masturbation does not cease after the age of six or seven but without any training becomes very much less At puberty *sexual feelings occur* which demand gratification and *the desire to* masturbate is very strong If the early training has made masturbation a *major sin then the early years of adolescence are spent in a state of conflict* and fear lest masturbation occur Sleeplessness dark circles under the eyes strain irritability tension restlessness brooding are signs of a desire to masturbate which is being opposed by the superego

One girl of thirteen spent practically a year of her life sleepless without appetite worried and unhappy because of her continual struggle with her desire to masturbate Had she realized that masturbation was harmless she could have done so and devoted her energy to her school work and her recreational and social life to much better advantage The adolescent who consults the doctor because he feels that masturbation is harming him is not being harmed by masturbation but is being harmed by his fears about it and because of these fears he is using energy in a struggle with masturbation that could be better used in his daily life Excessive masturbation seldom occurs but when it does it indicates a serious difficulty in the child's relation with his parents and a marked lack of their love Practically the only case of excessive masturbation I have seen occurred in an eight year-old boy whose parents hated him because he was the obstacle which prevented the dissolution of their unsatisfactory marriage Hating him already when the masturbation was detected they both directed all their energies toward stopping it without *result* although these *efforts ranged* from constant supervision and restriction through all kinds of unusual and cruel punishment to the employment of *strong bladder irrigations* and *prostatic* massage of a painful type *The more* he was punished the more unhappy and unloved he felt and the more he *resorted to masturbation as his only source of instinctual gratification* Masturbation therefore requires only an investigation of the child's situation to see if there is a *fairly* decent parental *attitude* a *reassurance to the parents* and obliviousness to the symptom Neither reproof punishment tonsillectomy circumcision clitoridectomy or any other form of treatment is necessary or desirable

Sexual curiosity is very strong before the age of six It is a normal reaction and should be regarded as such the child's questions being answered as fully as possible Whether answered or not his curiosity will lead him into sexual investigation with other children and into sex play In the majority of cases parents do not discover this If they do the child usually is punished but unless this punishment is very severe no harm is done to the child who con

tinues his sexual investigations, being a little more careful that he is not caught Sex play between children of the same sex is the usual thing during the latency period, seven to puberty and needs no correction

Every child therefore, passes through a number of important stages in his psychological development First the stage of oral gratification in which all pleasure and all relations to other human beings is through his mouth activities During this stage his main relationship is with his mother, the object of food and oral pleasure He needs and desires her above everyone, and he bitterly resents any thing or person that interferes with his relation with her He fears also lest that relationship be taken away This stage is terminated by the mother through weaning and the pleasure desire passes on to the next stage, while a portion of the superego is erected to keep the desire for oral pleasure in subjugation If the period of breast feeding has been less than optimum more pleasure remains attached to the oral activities and more energy has to be relegated to the superego to keep these desires in check If the period has been unduly prolonged the oral desires are unduly stimulated and the weaning becomes a more difficult process

Second, the stage of bowel pleasure, in which all interests, relationships and pleasures center around bowel activities Again the main relationship is with the mother and the child when toilet training is instituted, has to decide whether he wishes to continue his bowel pleasure unhampered and so lose his mother s love or whether he will relinquish it in the hope that his mother will love him more for so doing If this conflict is solved normally, he does the latter, and the pleasure desire passes on to the next zone During the solution of the conflict he uses his bowel activities to express resentment defiance and anger, because his mother will not allow him to retain this form of pleasure and love him at the same time Also he uses these activities to try to control her There is in the process of learning to control his excretions the ventilation of the desire for mastery resentment defiance and anger in relation to another human being, who at the same time is loved If toilet training takes place at the optimum time and the process is gradual there will come an ability to tolerate and utilize to advantage the aggressive desires mentioned above and with the displacement of bowel pleasures to another zone a new part of the superego is erected against desires for bowel pleasures but not against the proper utilization of aggression If the toilet training is begun too early, is carried through too stringently and rapidly, there is no opportunity to master and control the aggressive impulses and they come under the ban of the superego, which requires a greatly additional amount of energy to keep them submerged Thus both useful aggressive impulses and the energy needful to keep them inactive are withdrawn from use and a permanent crippling of the personality takes place

Third the stage of pleasurable manipulation of the genitals This is the preparation of the future sexual life of the individual and is associated with the preparation for all future human relationships During this stage the little boy has strong feelings of pleasure and happiness directed to the mother and hatred and aggression directed to any person who tends to interfere with his relationship with her The main interferers are the father and other children and to them there arise strong resentments These resentments come in conflict with the love and admiration felt for these people also and the phase terminates normally with the suppression of the physical desire for the mother and the physical hatred for the father These feelings are replaced by tender sympathy for the mother and tender admiration for the father the former feelings being displaced on to persons outside the family group and the path of direction of these feelings to the parents closed by a further development of the superego If there have been real difficulties in the relationships with the parents then the smooth progress is halted and the strong physical feelings are suddenly submerged rather than redirected This requires the displacement into the superego of a great deal of energy to keep these feelings in abeyance Such an overactive superego interferes with all later relationships with other human beings because they represent outlets for these prohibited strivings The change in the relationships with the parents culminates about the age of seven years and is followed by a period of slower development during which the child devotes his energies to acquiring skills to fit him for his adult life This period in turn is followed by adolescence

The psychodynamics of this development are important If each stage progresses smoothly through an optimum period the passage to the next stage proceeds without untoward difficulties and an efficient adult life is obtained If a stage is curtailed too much part of the psychic energy remains fixed there requiring an equal amount to be fixed in the superego against the desires of that stage and leaving less energy free for further development with a tendency in the face of later difficulties to try to return to the suppressed pleasure activities If a stage of development is severely interfered with the course of development may halt and the psychic energy instead of flowing forward will flow backward to the preceding stage exposing the individual to a severe conflict because he needs to obtain his pleasure in forbidden ways

Thus to understand an emotional problem in a child the following facts must be ascertained

First the child s symptoms social and physiological These indicate the stage of development where the difficulty has occurred because they will represent in a more or less distorted fashion the normal behavior of that particular period

Second the difficulties which the child is facing in the present actual stage

of his development and which are causing him to try and return to an earlier stage

Third whether these difficulties are actually present in his real life, i e, whether they result from over restrictive parental and adult attitudes, from acts of fate in his present life, illness, death, desertion of parents, etc

Fourth whether these difficulties are the result of over stimulation of earlier suppressed desires which have come under the ban of a too severe superego

These questions of psychopathology are ascertained through the examination

The Psychiatric Examination

This consists of an examination of the child and of his environment For the child it is necessary to know

1 His constitutional characteristics

a His physical status A thorough physical examination is necessary, but the results of this examination should not be too hastily considered as the cause of his difficulties In my experience few children presenting psychological problems have any physical disorder Defective vision teeth, tonsils, long prepuces are as common in this group as in any similar group of normal children, and although occasionally a school difficulty or some other problem may be improved by attention to the physical state, in the majority of cases such methods of treatment because they have no bearing on the problem, do no good and often do harm in directing the attention away from the real difficulty or by subjecting the child to painful and frightening procedures Very often an attack of acute anxiety or an obsessional or hysterical neurosis has arisen from the too prevalent practice of circumcision tonsillectomy teeth extraction etc done when not really necessary, but simply because on a superficial examination nothing else could be found wrong There are certain parts of the body about which every child develops many emotionally toned ideas These are the mouth and throat the anus and the genitals Most children show considerable agitation when these parts are examined, and it is better to make such examinations only after the child s confidence in the doctor has been thoroughly established and by methods that decrease the child s agitation, such as allowing him to manipulate the tongue depressor himself or to forego them altogether unless urgently necessary

Perhaps at this point it would be well to call attention to the seriousness of subjecting a child particularly a young child or one who already shows mild neurotic symptoms such as fearfulness to a painful and frightening operative procedure, particularly if that procedure effects parts of the body with a high psychic significance such as the penis Such an operation frequently results

in a permanent deviation of the character or in the inception of a severe neurosis which because it does not assume its full blown character for several months after the operation is not recognized as being integrally connected with it.

Although there has been much written to the contrary in my experience constitutional endocrine abnormalities are found but seldom in children with psychological problems Goebel made a very thorough biochemical study of all the children admitted to the Franklin School of the Pennsylvania Hospital All of these children presented such extreme psychological problems that they could not remain in their own homes and consequently were a much sicker group than are found in out patient clinics or in private practice Her studies also were very intensive and her results were negative for variations in body chemistry or in endocrine dysfunction

b A competent examination of the intelligence is desirable Many children present psychological problems in relation to their school life and in some instances their problem depends on a difficulty in the adjustment of their level of intelligence to the demands of the school system Such cases do not often come to the physician however because usually they are managed within the school system itself Here again a word of warning is necessary An intelligence slightly below or above the average does not indicate always that this difference in intelligence is the causative factor in an illness Consequently the results of the intelligence examination must also be weighed in the light of the other studies

2 Detailed data concerning the child s symptoms including the circumstances under which they are present or absent the chronological history of their development and of any changes which they have undergone

3 Detailed data concerning the child s present life his behavior and objective attitudes toward his parents siblings teachers companions of both sexes his school work recreations and his physiological functions Sections 2 and 3 can perhaps best be obtained from his parents or the other adults with whom he is associated and obtained in this way serve when compared with the child s own productions as a valuable check on his stated attitudes and on the attitudes of his parents and teachers

4 Detailed data concerning the child s own psychic productions These may be ascertained from his verbal productions produced as freely as possible and with the minimum of questioning from his written and drawn productions and from his play day dreams and dreams As with the adult so much more with the child there are two essentials to the technic of obtaining data concerning the psychic life First the child must be placed at his ease as much as possible This is no easy matter and may require much ingenuity on the part of the examiner and the utilization not of one but of a number perhaps a great number of examination periods Second the spontaneous unin

terrupted productions of the child whether verbal, written drawn or dramatized are of infinitely greater value than those obtained by questioning In fact, the technic of analysis i e free association is the most valuable method of obtaining data concerning the real psychic life Many children respond very easily to a friendly approach and once their initial fear has been dissipated reveal much in everything they say or do There is, of course, in every child an initial fear of the doctor as a person who is connected with strange, horrible and mysterious happenings illness birth, death, etc about which the phantasy life of the child is deeply concerned Any action or word on the part of the examiner that heightens this fear will tend to make the collection of data more difficult

5 Detailed data concerning his history This must include the chronological story of his illnesses of the deaths births and illnesses in the family since his birth, of his rate of development and particularly detailed information regarding his nursing and weaning experiences and his training in bladder and bowel habits

For the environment as much data as possible should be obtained concerning the behavior and personality and particularly the attitudes to the child of his parents siblings and teachers or of other adults living in his home Here again the spontaneous uninterrupted story of the father and mother furnishes much more important data than can be obtained by questioning

When this data is assembled one often begins to get a striking picture of the child s illness and the attitudes or events which have been connected with its development Also it becomes plainly evident in most cases that the presenting symptom is not the only disorder but that there are associated other symptoms, inhibitions of activity and character and personality deviations Even the experienced psychiatrist often is astounded to note how the careful study of a child presenting occasional attacks of hysterical vomiting reveals a wealth of pathological formations in the child s family, social recreational and school life and disorders and deviations of his character which would pass unnoticed otherwise until the difficulties of puberty or the emotional stirrings of completing school choosing a vocation or falling in love suddenly bring them to the attention of everyone

General Therapeutic Consideration

Study of the situation having revealed the pathology, the application of treatment measures to the pathological situation becomes necessary Is the source of the difficulty the rejective attitude of one or both parents, i e is the home one in which no child could be expected to adjust without difficulty? If this is so, the home situation must be corrected It must be remembered

that little harm is done through ignorant handling of the child if there is present a basic affection for him Often some of the worst homes are those in which both parents are highly educated even along the lines of child psychology, but where their emotional difficulties are being worked out on the child even though this is apparent only to the observer and not to the parents themselves In such situations little benefit will come from telling the parents where they are wrong and suggesting other methods of procedure Even if they agree which they usually will not they apply the suggested measures in the same manner as they applied their own methods i e to the child s detriment Two courses are open The child may be removed from the home and placed either in a proper foster home or in a carefully selected institution Placement is often a desirable procedure but is not a universal panacea It should be used only where the child is not neurotic i e has not an over severe superego and where little or nothing can be done with the parents problem It is also useful sometimes as an adjunct to psychotherapy for the child i e in those cases where the parents would interfere with the successful course of treatment If the parents are neurotic and their neuroses are causing the child s difficulty treatment should be of the parents neuroses Usually such neurotic parents do not feel their own illness and therefore will reject any therapy for themselves If they will accept treatment for themselves that course should be followed if their neurosis is not too severe and if they have confidence in their doctor they may be able with care and persuasion to follow his advice If neither is possible the child should be removed from their care

Placement may be either temporary or permanent Temporary placement is of value while a study is being made of the situation and of the child or while some plan is being devised It may be made in a temporary foster home an institution or a hospital It must be remembered that placement is in itself a severe trauma to the child and must not be attempted lightly Also very often the emotional shock of temporary placement stops the symptoms for a time This is particularly true of enuresis where the bed wetting stops entirely during a hospital residence to recur as soon as the child returns home

Permanent placement also must be undertaken only for definite reasons These are first an intolerable home situation which cannot be altered or can be altered only very slowly second an intolerable neighborhood situation in which complete rejection of the child has occurred third where the child s symptomatic behavior is such that he cannot be tolerated in his home or in his neighborhood This group includes severe neurotic illnesses psychoses and marked antisocial behavior

There are two types of permanent placement institutional and foster home The first is desirable where the parents cannot tolerate their child being in a private home but will permit institutional care and where the child s symptoms

are too serious for a private foster home to handle i e, severe neuroses, psychoses and extreme antisocial behavior, stealing and sex delinquencies are the most common behavior of this type and are difficult because of the community reactions to them

There are three types of institutions available, orphanages, correctional institutions and special hospitals The last is, of course, the best placement for severe neurotic cases and psychoses The use of the former depends on the quality of the personnel There would be no hesitation in using a correctional institution for many cases if the personnel were of the calibre of that in Aichorn s Institution in Vienna but unfortunately most correctional institutions are under the jurisdictions of the State and the salaries paid do not attract the type of personnel which is adequate for these children By and large, the type of institution selected depends as does the type of foster home, on the emotional adjustment and knowledge of those in charge Therefore, even foster homes must be selected with great care and before placement is made, a good child placing agency should be consulted and the selection of the foster home left in their hands The agency should know the factors detrimental in the child s present home and whether the placement is the only therapy being used, or whether it will be accompanied by other treatment measures

The other methods of therapy depend on the child s illness Neurotic and psychotic cases require psychotherapy Cases of delinquency of the true type and of the type where the child has come from a delinquent environment require measures to insure the development of a more social type of superego (This will be discussed under the section on delinquency) Psychotherapy for children is the same as psychotherapy for adults i e, suggestion persuasion, the ventilation and resolution of conscious conflicts and psychoanalysis As with adults suggestion and persuasion depend on the establishment of a strong emotional transference to the therapist whose suggestions and persuasion are then accepted The hope in this type of therapy is that the suggestions and persuasions will continue to operate after the relationship between child and therapist has been severed or that the child will displace this relationship on to some adequate person in his environment who will continue to function in that capacity The ventilation of conscious conflicts enables the therapist to judge at which points the child s environment may be altered in order that such conflicts may not occur Frequently by discussion with the loved therapist the child gains some insight into the causes of his behavior and is able to seek his gratifications in some more individually beneficial or socially acceptable way For the neuroses particularly the more severe ones such treatment is only palliative it alters the symptoms but only replaces them with others less distressing to the community but eventually deleterious to the child

A boy was first seen at nine with the following history He had been a

serious neighborhood and family problem since he started stealing at four This stealing however was of the neurotic type and the earliest signs of his neurosis severe constipation and general unhappiness antedated the stealing Most of his behavior was motivated by his desire for revenge on his parents who had rejected him completely favoring in every way the older siblings and particularly his twin sister His behavior became so difficult that placement was advised and was done In the foster home with very intelligent foster parents who loved the child his antisocial behavior completely disappeared His mother however could not tolerate that her hated child could behave well She removed him from the foster home after a number of months but before it seemed really desirable At home his social improvement continued but he became a pronounced obsessional neurotic unable to make friends with persons of either sex overly scrupulous and conscientious in his reactions stating that he could not stand the way in which other boys behaved and therefore could not mingle with them placed his whole interest on the accumulation of money (it was interesting that formerly his mother had complained bitterly about his stealing now she complained as bitterly and with exactly the same expressions and emotional reactions about his attempts to get work and to save his money) and showed typical obsessional mannerisms and behavior His aggression which formerly had been turned against the world had now been turned against himself and his prospects are for a very unhappy and unsuccessful life unless he gets treatment for his neurosis The antisocial behavior was not cured but its direction was changed to his detriment

The severe neuroses require psychoanalysis for cure and such analysis is only desirable at the hands of an experienced child analyst He should be consulted regarding every such case for his opinion as to whether an analysis is desirable or possible or as to whether the child might be treated by an application of psychoanalytic knowledge without being analysed This has been done successfully under the direction of an experienced child analyst by teachers etc in Vienna Those interested in such a procedure can get further information from the recent articles in the Psychoanalytic Quarterly particularly Vol IV, No 1, January 1935

Classification of Psychological Problems of Children

The classification of psychological problems in childhood still presents the chaotic picture that adult psychoses and neuroses presented a century ago Most classifications of psychological problems have dealt with those occurring in the adult Rickman[1] has dealt with the optimum age of occurrence as follows

1 Anxiety states (anxiety neurosis) occur at the earliest in infancy but are

are too serious for a private foster home to handle, i e, severe neuroses psychoses and extreme antisocial behavior, stealing and sex delinquencies are the most common behavior of this type and are difficult because of the community reactions to them

There are three types of institutions available, orphanages, correctional institutions and special hospitals The last is, of course, the best placement for severe neurotic cases and psychoses The use of the former depends on the quality of the personnel There would be no hesitation in using a correctional institution for many cases if the personnel were of the calibre of that in Aichorn s Institution in Vienna but unfortunately most correctional institutions are under the jurisdictions of the State, and the salaries paid do not attract the type of personnel which is adequate for these children By and large, the type of institution selected depends, as does the type of foster home on the emotional adjustment and knowledge of those in charge Therefore, even foster homes must be selected with great care and before placement is made a good child placing agency should be consulted, and the selection of the foster home left in their hands The agency should know the factors detrimental in the child s present home and whether the placement is the only therapy being used or whether it will be accompanied by other treatment measures

The other methods of therapy depend on the child s illness Neurotic and psychotic cases require psychotherapy Cases of delinquency of the true type and of the type where the child has come from a delinquent environment require measures to insure the development of a more social type of superego (This will be discussed under the section on delinquency) Psychotherapy for children is the same as psychotherapy for adults i e, suggestion, persuasion, the ventilation and resolution of conscious conflicts and psychoanalysis As with adults suggestion and persuasion depend on the establishment of a strong emotional transference to the therapist, whose suggestions and persuasion are then accepted The hope in this type of therapy is that the suggestions and persuasions will continue to operate after the relationship between child and therapist has been severed or that the child will displace this relationship on to some adequate person in his environment, who will continue to function in that capacity The ventilation of conscious conflicts enables the therapist to judge at which points the child s environment may be altered in order that such conflicts may not occur Frequently by discussion with the loved therapist the child gains some insight into the causes of his behavior and is able to seek his gratifications in some more individually beneficial or socially acceptable way For the neuroses particularly the more severe ones, such treatment is only palliative it alters the symptoms but only replaces them with others less distressing to the community but eventually deleterious to the child

A boy was first seen at nine with the following history He had been a

- *b* lower gastrointestinal dysfunction
- *c* urinary dysfunction
- 2 obsessional behavior

III Disorders of motor activity
- 1 general restlessness
- 2 convulsive disorders
- 3 tics
- 4 habit movements thumb sucking etc
- 5 speech dysfunction
  - *a* stuttering
  - *b* speech defects

IV Disorders of social behavior
- 1 chronic aggressive reactions
- 2 inhibitions of activity
  - *a* in social relationships
  - *b* of intellectual activity
    - (1) general
    - (2) specific — reading and other educational difficulties
- 3 homosexuality and perversions

V Psychoses
- 1 reactive depressions
- 2 schizophrenia

Disturbances of Psychological Function by Brain Injury or Disease

It is not my purpose to discuss the disturbances of psychological function due to brain injury or disease These are usually the same as in the adult and the diagnosis and treatment can be found under the sections devoted to adult brain injury and disease Dr Bond (see Chapt III of this volume) has considered fully the effects of chronic epidemic encephalitis

Difficulties of Socio-Psychological Adjustment due to Innate or Acquired Physical Differences

I *Differences in Brain Development* — There are two groups of individuals who have difficulties in adjustment because their brain development differs from that of the average child

First the severe cases of mental deficiency whose brain structure shows an extreme difference from the average and results from either a congenital taint or severe intracranial disease or injury either before during or shortly after birth The diagnosis and management of cases the well recognized idiot

commonest at the crises of the vita sexualis, i e, puberty and late adolescence

2 Neurasthenia earliest in infancy, commonest in adolescence

3 Conversion hysteria earliest at the phallic stage, i e, about three to six

4 Anxiety hysteria earlier than conversion hysteria, most common after the latency period begins i e about seven years

5 Obsessional earliest in childhood, common during the latency period but less common at puberty

6 Paranoid reactions, after the attempted resolution of the conflicts about the parents

7 Manic depressive reactions after failure to resolve the conflicts about the parents

8 Schizophrenia earliest in early infancy, commonest after puberty

9 Pathoneuroses earliest very early in infancy, not common during the latency period

Strecker and Ebaugh[3] give the following

I Reactive — 70%
- *a* habit training
- *b* protest and negativism
- *c* recessive (overdependence)

II Toxic physical and organic — 20%
- *a* acute infections
- *b* chorea
- *c* micturition
- *d* organic infections
- *e* endocrine

III Mental deficiency

IV Psychoses

I have adopted a more complicated but more detailed classification

A Disturbances of psychological function by brain injury or disease

B Disturbances of socio psychological adjustment due to innate or acquired physical differences
- I Differences in brain development (mental deficiency or superiority)
- II Differences in physical development

C Disturbances of socio psychological adjustment due to emotional conflicts
- I Anxiety states
  - 1 acute
  - 2 chronic
- II Psychoneurosis
  - 1 conversion hysteria
    - *a* upper gastrointestinal dysfunction

A seven year old girl has the intellectual capacity of a twelve year-old yet she is brought for examination because she is failing in her school work and is a behavior problem in the classroom The following situation is found When she entered school she was able to grasp the material presented in about a quarter of the time required by the rest of the class Consequently she had nothing to do during three quarters of the school day With this idle time on her hands she became disinterested even when confronted with new work and began to idle all the time Her companions having to work for their achievement began to surpass her She commenced to feel that the teacher was being unfair in giving more praise and better grades to others than to her Resentful of the teacher she began to use her idle time to annoy both the teacher and the other children For this she was reprimanded which increased her resentment She dropped the little interest she had in her work and devoted all her time to expressing her anger and annoyance and so failed of promotion Her behavior differed in no way from that of the type of child first described

Therapy for the child who is showing difficulties of adjustment because of an attempt to force him into a set situation whether his degree of brain development is much greater or much less than that of the average child, will be directed not toward changing the child but toward changing the situation The child must be placed in a school setting where he can achieve the same degree of success as his companions and where the reaction to unnecessarily over stimulated feelings of difference need not occur Ideally there should be special schools for both the mentally retarded and mentally gifted and most communities are making advances in this direction One must be very sure that the difference in brain development is the real etiology of the trouble or the application of this type of therapy will result in serious failure

A boy of fourteen showed much of the behavior described above It was found that his interests were predominantly mechanical and that along these lines he was extremely gifted Otherwise his intellectual capacity was average It was felt that his difficulties might be caused by the lack of use of his exceptional ability His whole school roster was changed to give him every opportunity to obtain the highest degree of success in his mechanical achievements but his behavior remained unaltered and he made even less use of his opportunities than before His problem was not that of a square peg in a round hole but was caused by a deep-seated emotional conflict

II *Differences in Physical Development* —The child whose degree of physical development is different from that of his companions often develops some feeling about this difference If he is smaller or slighter he finds himself unable to compete successfully in sports and is often not included in group games He resents this fact and feels inferior Usually he can find some pursuit in which he is better than the others and he develops this ability as a

and imbecile has been considered in the section on organic brain conditions Most of such cases with the exception of cretinism and hydrocephalus are unalterable by medical measures and require the specialized types of education given in institutions for the feeble minded

The second group includes none of these cases but is comprised of those individuals whose complexities of brain structure are either slightly less than the average the mentally retarded group, or better than the average, the mentally superior group In neither of these groups is there brain disease or defect but their occurrence is inevitable because of the inevitable differences in human beings Such individuals only begin to be recognized as problems when an attempt is made to standardize human beings There is an increasing tendency in modern civilization to standardize everything and this is most noticeable in the school systems Nearly all school systems have compulsory school laws curricula etc, which are developed for the average child It was a number of years before it began to be recognized that all children were not cut in the same mould For those who are above or below the average such an inelastic system works great hardship

A boy, not mentally defective but whose intellectual capacity is below the average by the age of twelve has reached the upper level of his scholastic achievement Already he has failed of promotion once or twice so that he is behind his companions in school but from this point he cannot expect further promotion He becomes uninterested with the repetition of the work following his last failure and starts to hate school because it is so uninteresting He does not realize where the difficulty that has caused his lack of promotion lies but begins to feel that the teacher must dislike him and favor the other children He reacts to this idea by disliking the teacher and the other children and proceeds to devote his time to annoying them His annoyance of the teacher results in her real anger against him, and her reproofs increase his feeling that she hates him The other children tease him because he is larger than they are, and if he retaliates, he is punished by the authorities This situation is intolerable, but he has to remain in it for perhaps two or more years, depending on the age of compulsory school attendance He has three recourses from this difficulty 1 If he has courage and capacity he may truant This of course leads to further difficulties with both school authorities and parents 2 He may remain in school and obtain some measure of gratification by being the bad boy of the school 3 He may escape from his situation into day dreams

Any of these solutions are simply the normal reaction to an intolerable situation intolerable not because of any defect in the child, but because the school system is too inelastic to deal adequately with anything outside the average A similar problem is found with other children whose intellectual capacity is above the average

an accident The hemiplegia was not severe and a good recovery was anticipated The parents became very frightened by the accident, constantly commiserated with the child on his misfortune hesitated to allow him to wait on himself restrained him from many permissible pursuits and had themselves the feeling which they communicated to the child that his life was ruined The boy adopted their attitude was unduly alarmed lest any exertion increase his trouble abstained from games and social life and was quite content to sit at home and be waited on He developed a marked feeling of inferiority for which he compensated only by wishing he were like other boys Asked to draw a picture he drew a boy with a tremendously oversized left arm and leg and carrying a pad in the left hand the side of his own hemiplegia At this point his life was being ruined by the improper handling of his feeling about his injury

CASE 2 A boy of seven had a paralyzed right arm following poliomyelitis His parents adopted a healthy sane attitude to the illness and treated him as has been suggested above As soon as he recovered he was able to lead an active happy life had little or no feeling of inferiority nor could it be seen that his disability had affected his life to any extent

Severe and permanent physical disabilities are perhaps immune to correction by medical measures but the physician sometimes forgets that if he can do nothing to remedy the defect his therapeutic ability need not cease The child has to continue to live with his disability and perhaps the greatest service the physician can render is to help him to obtain as completely and as quickly as possible ways of achieving success and happiness that will replace those of which he has been deprived

Disturbances of Socio-Psychological Adjustment due to Emotional Conflicts

I *Anxiety States a Acute* —Acute anxiety states are seen more frequently by the general practitioner than by the psychiatrist The outstanding symptom is dread and the dread is associated with the physical reactions of fear sleeplessness crying desire not to be alone loss of appetite tremor a worried expression inability to concentrate and sometimes temporary loss of consciousness or amnesia Hallucinations in my experience usually olfactory also occur

CASE 1 A boy aged eight accompanied a friend to see a bonfire He dreaded to approach the fire about which other boys were playing but stood across the street observing it Suddenly he smelled iodine alcohol ether and mercurochrome became panic stricken ran home as fast as he could, went upstairs to his bedroom and shut the door He could not stay there but rushed down and clung to his mother He refused to eat to go outside to

compensation Through this the feeling of inferiority disappears If he is larger or better developed, he cannot be rejected because of incapacity but may be because he can do so much better When the rejection takes place, he also develops a feeling of inferiority The degree of this feeling of inferiority depends on the real degree of difference and the degree to which the feeling can be lessened depends on the real possibilities of compensatory activities Consequently when an average child in an average environment complains of marked feelings of inferiority or when his behavior indicates the presence of such feelings there is some more adequate cause than a slight defect in vision or hearing a slight difference in size or a difference in the color of his hair or his eyes, or the fact that he has to wear glasses Such statements are really excuses for a much more serious problem i e an emotional conflict which prevents him compensating in the usual way and treatment must be directed to the solution of that conflict There are certain conditions such as the loss of an arm or leg vision or hearing partial paralyses cardiac disabilities etc, which by their very nature make the child permanently different from other children and make severe drains on his ability to compensate Of course in order that the disability may not traumatize the child s ego with an overwhelming feeling of inferiority, adequate compensations must be developed, and the possibilities for these must be investigated carefully in every case There are a number of very important considerations of which the attending physician should be aware in his management of every case of organic illness, which will result in a permanent physical disability First the degree of disability must be carefully ascertained This is particularly true of heart conditions The child has to live even if his heart is defective, and his physician and his parents should know exactly how much his disability will interfere with his activities The degree of disability and the actual limitations which it will work in his life, should be discussed fully with the parents in order that they do not urge the child beyond his capacity or restrain his activity unnecessarily Second as soon as possible the attitude of all those in charge of the case physician nurse parent and teacher should be directed away from useless sympathy toward encouraging the child to resume every permissible activity at the earliest possible moment Neither time nor words should be wasted in vain regrets for what the child has lost Third the period of convalescence should be shortened as much as possible so that the child gets the feeling that there are more important and interesting things in the world than lying in bed and being waited on Fourth from the earliest time possible, every form of permissible compensation activities in which the child can achieve a feeling of success should be encouraged The contrast between the following two cases illustrates most clearly the importance of this

CASE I A seven year old child developed a mild left hemiplegia following

neurotic symptom First is a deprivation of love This is followed by introversion of the libido reactivation of earlier very childish repressed ideas and earlier ways of obtaining pleasure and the attempted return of these repressed ideas to consciousness This attempted return is indicated by the anxiety attack The next step in the process is the attempt to reduce the anxiety by the development of neurotic symptoms as will be discussed later and therefore if the situation which gives rise to the anxiety is left untouched the anxiety may disappear after a lapse of time but will be replaced by a permanent change in the individual either in the form of a neurotic symptom or in a neurotic character change It seems clear that the anxiety represents the return of a repressed wish which has been reactivated because of some libidinal deprivation in the child's life The libidinal deprivation may be of a sexual nature using sexual in the commonly accepted sense which will be masturbation in a child or maybe a deprivation of some one of the pregenital pleasure components which later are incorporated in the sexual field

CASE 5 A girl aged two-and a half suddenly developed severe anxiety when asked to go to bed On study it was found that she was afraid to lie down The fear of lying down was a fear lest she soil herself when she did so This fear was the expression of a childish desire to soil herself This desire had remained energy-charged because her toilet training had been very sudden and very effective and she had resented the whole process but had submitted through fear lest she lose her mother's love When at two-and a half there arose a situation where she feared lest her mother go away the energized desire rose close to consciousness and her symptoms developed

The analytic study of adults reveals a number of acute anxiety attacks in childhood

CASE 6 A woman when six years old had a fear that if she hung her hand out of bed a ghostly hand cut off at the elbow would seize her At this time she had a strong desire to masturbate and she had been admonished that, if she masturbated her hand would be cut off The fear that her hand would be seized by a mutilated hand stood for the desire to masturbate and the punishment she feared would result if she did

CASE 7 A woman with an adult sexual difficulty of a neurotic nature spent nearly six months when she was twelve years old walking the floor at night instead of sleeping She feared to lie down in bed and when she did so, she was extremely frightened and uncomfortable She did not know what was the matter but felt that she was liable to do something extremely wrong for which God would punish her This crime was her desire to masturbate

Numerous examples of this type indicate that acute anxiety attacks are universal in childhood In most cases the attacks are not severe or lasting enough to come to the parents attention When they do the situation usually

stay alone or to sleep in a room by himself During the night he had great difficulty falling asleep and when he did so his sleep was extremely broken and restless He cried a great deal

In some cases the terror becomes so great that there may be sudden loss of consciousness or of memory

CASE 2 A girl aged twelve was taken for the first time to the barber to have her hair cut While sitting in the barber s chair, she became restless frightened and suddenly fainted There was no physical cause for the fainting and it was repeated the next time she visited the barber

Although such severe cases are not very common there is little need for a further description of the symptoms of acute anxiety data for they are familiar to everyone who has close contact with children In fact one or more mild anxiety attacks occur in the life of every child

CASE 3 A boy of eight shortly after being put to bed began to cry and call for his parents He stated that he was afraid He could give no adequate explanation of his terror but said it might be due to a creaking floor After a little reassurance he felt less frightened and dropped into a peaceful sleep

Whether the attack be mild or severe, the child is unable to tell why he is afraid He may say he is afraid of specific things, creaking floors kidnappers iodine ether etc but neither his own knowledge that these causes are irrational nor the reassurance that there is nothing to be afraid of quiets the terror He behaves as if in the presence of a real danger in his surroundings, but no such danger can be found Of what then is the child afraid?

CASE 4 A girl of six during the course of an interview began by being extremely antagonistic and attacking Shortly this changed to extreme fear She could hardly stay in the room crouched in a corner, cried and screamed pitifully and then suddenly asked the physician to spank her When asked where she wished to be spanked she pointed to her genitals On another occasion following the same type of anxiety she stood and struggled visibly with the impulse to take all her clothes off and exhibit herself to the doctor In both instances her anger and aggression had served as a cover for her fear, in one case that the doctor would attack her sexually in the other that he would look at her naked body Actually she wished the doctor would touch her genitals or look at her naked body but she feared these desires as very dangerous because she had the idea that to be touched in the genitals was to die and to show herself nude was to be punished severely The anxiety attack, therefore indicated to her that she wished to do something dangerous In reality what she wished to do was simply an infantile expression of affection (exhibitionism) and longing for a return of that affection (touching the genitals) and was called forth by the lack of real affection in her life

An anxiety attack marks the first step toward the formation of a psycho-

Of course the discrepancy is not as great as it appears when one examines the life of both children carefully. In Case 8 the boy was rather fearful when his mother went out to the store and often demanded that he go with her. He was very demanding of her attention and always saw to it that he got what he wanted and that he had the best and most expensive clothes, toys, etc. in the family. If he was not given what he desired he had a temper tantrum, lying on the floor and kicking and screaming. His demands on his mother's time, purse and interest were an expression of his underlying fears and his need for her protection and comfort. In Case 9 there was also an extreme devotion to the mother. The girl stayed with her mother always, never went out without her and preferred and insisted on helping her or being with her rather than play or associate with other children. Latterly this insistence had become so marked that she remained home from school on the basis of feeling tired because of her disturbed sleep and because she felt her mother needed her help. This excessive devotion to the mother seems to have been motivated by the child's underlying fear and her hope that the presence of her mother would protect her from it. This need for protection is a marked symptom of anxiety states whether found in children or adults.

b. Chronic Anxiety States. — Very often a child is unable to displace most of his anxiety into his sleep and greater or lesser amounts are present throughout his waking life which is filled with constant fears of greater or lesser intensity.

CASE 10. A boy of six suffered from frightening dreams and was afraid of loud noises, unusual sounds, large animals, thunderstorms, the dark and being upstairs alone. So extensive were these fears that they came to include most of his daily avocations and new fearsome objects were constantly being added to the list. In order to rid himself of the pain of his condition he dropped one pursuit after another but could not escape from fear situations outside of his control such as thunderstorms, during which he could only crouch in terror or attempt to hide. His process of externalizing the fear by displacing it into an object in his external world was not a satisfactory one because it was incomplete and a real phobia did not develop to give him relief.

The real phobia is perhaps the most satisfactory flight from anxiety. When the anxiety has been displaced into a real object or situation then the child can avoid the situation and so have relief temporarily from the feeling of dread.

CASE 11. A girl of four had a pronounced phobia of dogs. If one appeared three blocks away she became panic-stricken and rushed into the house or clung to her mother screaming. It made no difference whether the dog was large or small, friendly or hostile, good natured or vicious, its appearance produced an anxiety attack. This fear of dogs did not follow any attack or injury by one but began suddenly. While she was convalescing from an

is very serious and indicates that the future psychic health of the individual may be damaged seriously unless some suitable therapy is instituted

It is absolutely useless to ask a child with an acute anxiety attack why he is afraid He cannot be expected to reveal to a parent or to a strange physician desires of which he is so afraid and he often is not even aware of their nature Consequently in the cases cited the illustrations of the underlying dynamics of the anxiety were obtained during intensive psychotherapy and would not have elucidated in any other situation It is also useless to accept the child s conscious statement that he was frightened because of something he read in the papers or saw in the movies The child will only be frightened by such events, if the event occurs when he is psychologically sensitive to it, and when the details of the event fit into his phantasies Among a number of children with whom I was acquainted and who saw Frankenstein , only a few were terrorized by it and in those few some detail of the picture fitted the child s own psychic life at that time

Acute anxiety is a very painful condition, and consequently, as soon as possible the child tries to rid himself of his feeling of terror Perhaps one of the easiest ways is to shift all the anxiety into his sleep When this is done, during the day the child feels little or no anxiety and at night the anxiety, of course is not due to anything in himself for which he might be punished but is due to strange things like dreams It is interesting to note the degree of ability that various children show in doing this

Case 8 A boy of six suffered from night terrors for several years Suddenly in the middle of the night he would call loudly for his mother in apparent terrible fear He strove to get out of bed to get to her and would do so if he was not held When his mother came to him he appeared to be very frightened of her did not recognize her and either struck at her or shrank from her After a period of time several minutes to an hour he would quiet down go back to bed and fall asleep Next morning he would have no recollection of the incident During the day he seemed quite normal and had no more than the ordinary fears of a child of his age This boy had all the motor and gesticular signs of fear without any actual consciousness of it and in this he differs from the next case

Case 9 A girl of fourteen had suffered for several months from frightening dreams Sometimes these dreams did not wake her although she remembered them with terror the next morning but often she woke in a panic from them So bad were they that she dreaded going to bed and more recently had refused to sleep alone Besides her dreams she had fears before she fell asleep that ghosts would grab her feet The memory of the dreams troubled her so much as to interfere with her ability to concentrate on her school work In this case the anxiety is not so completely removed from consciousness as it was in the previous one but a strenuous attempt is being made to do so

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attack of pneumonia she suffered a night terror In the early hours of the morning she began to scream and did not seem to recognize any person in the room When her father came toward her, she shouted for him to go away When her mother asked what the matter was, she said there was a dog under the mother's bed When the father again approached her, she screamed "Go away You're a dog" After some little time her terror subsided and she fell asleep quietly On waking the next morning she was perfectly calm, but from that day on her fear of dogs was present

The background of this case is important The mother and father were superficially on very good terms but the mother was being induced by a former lover of hers whom she still loved to leave her husband The mother's mental turmoil over this situation was evident to the child, and her knowledge was increased by the slighting remarks and inquiries concerning the mother's behavior made to the child by the paternal relations whom she visited with the father every Sunday and holiday the mother being left at home The child got the idea that the mother would very soon leave and that she was not a proper person Under the fear of the mother's impending desertion, strengthened by the mother's somewhat hostile attitude to this little girl because the child represented a bond which held her to her unwanted marriage, the child seems to have turned to the father for affection Such a turning would make her feel extremely jealous of her mother and wish heartily that the mother would soon disappear from the scene, but along with this wish there was also her real affection for the mother and the conflict between these two ideas made her love for the father extremely dangerous to her If she secured the father's affections it would be at the cost of the loss of her mother and might also bring upon her maternal retaliation for the theft of the father Therefore, the loved father appeared to her as very dangerous, and consumed by this conflict in her half waking state, she saw the father as a large and threatening animal This may have been partly due to the fact that the mother was very fond of dogs By substituting a dog for the father she places all her fear, hostility, guilt and conflict upon the head of the dog separates these feelings from her father and so is able to live comfortably in the situation with both her parents as long as no dog appears From many points of view it is rather a comfortable solution because she really can stay away from dogs Such a projection of the conflict over a loved parent is the underlying basis for all of the phobias of animals

It was possible to prove in this case that the fear of dogs represented simply a crystalization of a chronic anxiety state Her fear of dogs was reconditioned by the method used so extensively by the behaviorists By the end of a week or ten days the child's phobia of dogs had completely disappeared She would stop and pat any strange dog no matter what his size or

general demeanor but coincident with her loss of fear of dogs she developed widespread chronic anxiety symptoms Her appetite became poor she was sleepless cried constantly could not bear her mother out of her sight and changed from a rather happy carefree child to a whining miserable pathetic one and was then like the other cases mentioned above

Children s phobias whether of large animals of the dark, of burglars ghosts kidnappers witches snakes and also of apparently insignificant objects such as bits of fluff furs birds or practically any object animate or inanimate which comes within the child s ken always represent the relation of the child to the parent Phobias of various sorts are almost universal in the latter part of the pre school period, because it is about this time that the peak of the child s difficulties in his relation to his parents occurs Fears of kidnappers and burglars in boys often represent the relation to a loved but dreaded father, or the fear of witches in girls in relation to a loved but dreaded mother Very often the factual basis for the whiteness of the ghost is based on the white night clothes of the parents who come to waken the child to take to the toilet

As Freud says the phobia probably is the normal neurosis of childhood and there are few if any children who reach adolescence without some such fear They are usually evanescent but when one persists or is very strong it becomes a definite neurotic symptom Case 11 also illustrates the fallacy and in fact the danger of treating such phobias by reconditioning methods It is much better to do nothing about the phobia unless it becomes so marked that the child s whole life is affected as it was in Freud s case of little Hans, where the boy could not go outside the house because of his fear of horses than to break down the phobia and leave the child exposed to his previous chronic anxiety state Unless definite intensive and curative treatment such as analysis is available it is desirable to leave the phobia untouched

Chronic or acute anxiety states may show themselves by physical symptoms A girl of three admitted to a nursery school appeared a perfectly well behaved and apparently well adjusted child On physical examination however her pulse rate was o beats higher than that of the other children A brief period of observation demonstrated that she suffered from chronic anxiety A boy of eight had unexplainable bouts of fever It was found that these bouts corre sponded to attacks of anxiety He was a child who never perspired apparently there was some abnormality of his sweat glands so instead of breaking out in a sweat when frightened he could not do so and his temperature rose as a result

Acute anxiety attacks chronic anxiety states and phobias augur poorly for the later psychic health of the individual They are definite indications of danger as much as an increased temperature and should not be regarded

lightly It follows therefore that the treatment should be as carefully considered and as judiciously chosen as would be done for a fever

It will be seen therefore that the anxiety attacks contain the following elements

1 An actual deprivation in the child s libidinal life

2 The presence of an energized repressed wish of an earlier period of psychosexual development

3 The fear that if such a wish is fulfilled, one of the major fears of childhood desertion by parents loss of parental love, bodily injury, mutilation and death will come true

4 The anxiety is an expression of this fear and is a danger signal of the presence of the wish and a sign to the child s ego to protect itself from the danger

Treatment therefore must be based on an understanding of the situation The larval cases need little more than factual reassurance with the belief that the course of development will adjust the situation In the more serious cases it may be possible to adjust the deprivation In the adolescent many anxiety attacks arise when the child stops masturbation suddenly because of some threat or fear of harm An intelligent discussion by a friendly physician of the whole question of sex and the harmlessness of masturbation may allay the fear and allow the resumption of the masturbation with the cessation of the anxiety attack Affective deprivations by parents may be handled by a full discussion with them of the need by the child of security and affection, and the resumption of a more positive attitude may be followed by cessation of the attack

Of course the success of such manipulative measures depends on the certainty that the factors to be manipulated are the real incitement of the attack Too often the tendency has been to try to manipulate the environment because of some theoretical concept on the part of the physician rather than because it is the real etiological situation

In many of the moderate and all of the severe cases the conflict, which produces the anxiety is one of which even the child himself is unconscious Therefore, the only treatment which will be curative is that which uses the only method known to uncover the unconscious namely psychoanalysis by a trained child psychoanalyst

The problem of the most desirable type of treatment hinges on the question of the balance behind the various components of the attack If the situational factors which produce the deprivation are very marked the probability is that the unconscious sensitization is not very great So if the situational factors are easily altered, it would seem best to deal with them If the deprivational factors are slight then the unconscious sensitization to deprivation must be

very marked, and only treatment of the unconscious conflict will be helpful

II *Psychoneurosis* — 1 *Conversion Hysteria* Probably one of the most economical methods of eliminating the anxiety that results from the need to express forbidden impulses lies in converting them into physical symptoms Conversion hysteria therefore is one of the commonest psychoneurotic illnesses seen in children Most commonly the physical symptoms are ocular gastric or intestinal Transitory disturbances of vision usually simply a blurring are common in children although often not noticed by the parents or reported by the child The more marked forms give some limitation in the field of vision usually concentric the child complaining that he is looking through a tube or as one patient expressed it as if the upper and lower orbital margins had grown out, limiting the vision above and to the sides Analyses of adults often reveal this type of disturbance in childhood and among children it would be found more commonly if it were looked for more carefully The purpose of visual disturbances is to prevent the child looking at prohibited things The desire to look is very strong and in order to enforce the prohibition he denies himself the total or partial use of his eyes

When one considers the great curiosity of the small child and that perhaps vision is the main avenue for its gratification it is interesting that marked visual disturbances are not met with more commonly However the human ability not to see things directly before him probably serves as a preventative of more severe conversion symptoms It is surprising how totally oblivious children as well as adults can appear to marked changes in their environment Very often a child will not seem to notice the mother's change in size during her pregnancy and will act as if no such change existed Probably this mechanism prevents the more frequent occurrence of hysterical visual difficulties

Upper gastrointestinal disturbances are also extremely common A boy aged twelve had suffered for six years from marked nausea and vomiting whenever he saw blood or feces or when he heard either technical or colloquial names for various parts of the body His symptoms bothered him particularly in the hygiene class Besides his vomiting he showed a very marked inhibition in his play life and in any aggressive activity During the two years before the illness he had suffered a number of important experiences

1 His baby sister had been born taking away from him the mother's interest and attention and making him wish he could take her place and be fed as she was fed

In his loneliness he turned to his grandfather who first subjected him to the frightening sight of a homosexual episode between himself and another man and who while drunk forced him to participate in some sexual act and then withdrew his interest from the boy to devote himself to another child

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Treatment therefore, must be based on an understanding of the situation The larval cases need little more than factual reassurance with the belief that the course of development will adjust the situation In the more serious cases it may be possible to adjust the deprivation In the adolescent many anxiety attacks arise when the child stops masturbation suddenly because of some threat or fear of harm An intelligent discussion by a friendly physician of the whole question of sex and the harmlessness of masturbation may allay the fear and allow the resumption of the masturbation with the cessation of the anxiety attack Affective deprivations by parents may be handled by a full discussion with them of the need by the child of security and affection and the resumption of a more positive attitude may be followed by cessation of the attack

Of course the success of such manipulative measures depends on the certainty that the factors to be manipulated are the real incitement of the attack Too often the tendency has been to try to manipulate the environment because of some theoretical concept on the part of the physician rather than because it is the real etiological situation

In many of the moderate and all of the severe cases the conflict, which produces the anxiety, is one of which even the child himself is unconscious Therefore the only treatment which will be curative is that which uses the only method known to uncover the unconscious, namely, psychoanalysis by a trained child psychoanalyst

The problem of the most desirable type of treatment hinges on the question of the balance behind the various components of the attack If the situational factors which produce the deprivation are very marked the probability is that the unconscious sensitization is not very great So if the situational factors are easily altered it would seem best to deal with them If the deprivational factors are slight then the unconscious sensitization to deprivation must be

development but which has become reactivated because of some pleasure deprivation in the child's present life The physiological function affected is that used in the original gratification The punishment is contained in the unpleasantness of the symptoms In the case cited the wish consisted of the desire to get oral pleasure from the mother and the desire to destroy the sister by devouring her because she prevented the attainment of this pleasure The inciting circumstance was the withdrawal of the grandfather's love and the *inability to relieve the sense of loneliness by masturbation* The *punishment* was the nausea which was the opposite of the oral pleasure

It is questionable if any child reaches puberty without having had one or two mild conversion symptoms which readily correct themselves For serious cases treatment is the same as for adults Suggestion is of value in removing the symptom but a more adequate handling is as follows 1 The present deprivations in the child's life should be corrected if possible 2 Present restrictions on the expression of emotional reactions usual to childhood should be removed

These are but adjuvant factors and do not relieve the hysterical factor in the child's personality This can be dealt with only by adequate psychotherapy and best by psychoanalysis

(a) Upper Gastrointestinal Dysfunction – Emotional Disturbances of Appetite (Chronic Anorexia) — Gastric dysfunction of a less degree than definite conversion hysteria but resulting from emotional disturbances are perhaps best dealt with here They are very common in children constituting about 24 per cent of all pediatric cases and many pediatricians consider that nearly every child has had some more or less marked disturbance in eating by the time he is seven years old Cases of chronic anorexia show gastric atony delayed emptying of the stomach diminished secreting function with diminution of free and combined HCl particularly of the former a marked decrease in mobility a decrease in the period and size of hunger contractions It is well known that such disturbances result from emotional upsets However to state that emotional disturbances upset the appetite is like saying it is upset by an infectious disease As Alexander[3] says internists generally recognize the importance of psychologic phenomena as causative factors in gastrointestinal disturbances but show little inclination to go more deeply into the nature of the psychologic situation being content with the general notion that the patient's nervous system is somehow overtaxed by the emotional strain of worries fears etc *If the nature of the feeding disturbance is to be determined* it is necessary to be more specific The primary emotions in the child are love the desire for physical pleasure hate expressed as rage and fear It is well known that these emotions are very strong and very easily evoked in children and that rage and fear are specifically upsetting to the gastrointestinal

3 During this period of deprivation and sexual excitation he had been caught masturbating by his mother and threatened with mutilation if he continued. His mother was an untidy person whose excessive menstruation always stained her clothes and was noticed by the boy.

His first attack occurred when he observed his mother change the soiled diaper of the new baby sister. It was not so much the sight of the feces but of the female genitals which to him appeared mutilated which disgusted him.

These situations, therefore, called forth a number of emotionally toned ideas, sucking his mother's breast, devouring that breast in order to keep it for himself and to prevent his sister having it, destroying his sister, mutilated genitals covered with blood and feces, disgusting and perhaps terrifying sexual acts between men, some dire punishment for masturbation. These ideas of dirt, death, blood and dirty objects in the mouth were all disgusting, terrifying and distasteful to him. The well known reaction to such thoughts is to become nauseated and vomit. Vomiting is an old biological attempt to remove from the body unpleasant contents and therefore he vomited in order to get rid of his ideas just as he would have vomited to rid himself of a stomach full of spoiled food. One can only speculate why he reacted to the unpleasant ideas by vomiting rather than by some other neurotic symptom because the actual mechanism is unknown, but it would seem that the vomiting represented

1 Disgust with anything which stimulated him sexually, because of the fear lest he lose his penis as appeared to him had happened to his sister and his mother, and because of his actual fear and disgust with the homosexual seduction.

2 Jealousy of his sister which his parents refused to allow him to express. In his mind his jealousy was represented by ideas of eating up and destroying his sister and taking her place at his mother's breast. This whole group of ideas was repellent to his conscious mind and could only find expression as unpleasant feelings, nausea and vomiting.

3 The jealousy was aroused by the mother's pregnancy, and his vomiting represented the memory of her vomiting and his attempt to express his longings for her by imitating her.

His improvement under treatment resulted in the cessation of his vomiting despite the actual unpleasantness of the stimuli and in a marked change in his attitude, namely the passive feminine was replaced by a normal active, aggressive masculine one which he could now express without any anxiety.

This case is set forth in detail in order to illustrate the well known mechanisms of conversion hysteria whether childhood or adult. The symptoms represent a compromise between an instinctual wish which is repellent to the child's conscious mind and a punishment for this wish. This wish represents an infantile form of gratification which has been relinquished during the course of

development but which has become reactivated because of some pleasure deprivation in the child's present life The physiological function affected is that used in the original gratification The punishment is contained in the unpleasantness of the symptoms In the case cited the wish consisted of the desire to get oral pleasure from the mother and the desire to destroy the sister by devouring her because she prevented the attainment of this pleasure The inciting circumstance was the withdrawal of the grandfather's love and the inability to relieve the sense of loneliness by masturbation The punishment was the nausea which was the opposite of the oral pleasure

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mechanism Any condition therefore, (a) which makes the child more irritable, with less resistance to an emotional strain, or (b) which tends to evoke a very strong emotional response particularly of fear or rage, will be reflected by his appetite

Incorrect general physical hygiene and ignorance of a child s habits makes him irritable and the following have an important influence on good eating 1 Fatigue as result of physical mental and emotional strain 2 Improper introduction of foods new in flavor and texture 3 Improper palatability, temperature and quantity of food and food that is not easily masticated 4 Improper implements time of meals or having to feed self if too young or too tired 5 Distraction by others entering room at meal time

What is true for the older child is also true for infants in whom situations, which produce the primitive instinctual reactions of fear, rage and anger, such as painful illnesses lack of sleep improper handling in bathing, clothing etc, improper position and unnecessary interruptions and distractions during feeding profoundly influence the child s appetite and his gastric function Emotional disturbances of the nursing mother also affect the infant I have observed several cases in which an emotional upset in a lactating woman has been reflected almost immediately by a gastrointestinal disturbance of the child In one case the mother was seriously depressed by a difficulty with her brother in law and sister immediately the child of two months developed gastrointestinal symptoms Whether this was produced directly by a change in the milk chemistry is not known

Maternal attitudes as to the amount a child should eat regardless of the constitutional degree of appetite often force a further disturbance of appetite in the child In one case the child was obviously getting sufficient food although its appetite seemed to be small but this did not satisfy the mother She crammed the child until he regurgitated and then fed him again She was a woman whose main interest in life was in stomachs and appetites, and before she had the child she was just as fussy about her husband s gastric functions Telling this woman not to overfeed her child had no result When she tried to follow this advice she saw every slight illness as the result of underfeeding Her overfeeding the child was the result of an inner emotional need

Any circumstance which arouses fear or rage in the child may affect his appetite Any disturbance or event in the home which makes the child angry or fearful because he feels he has lost his mother s affection or any circumstance which gives him so much more of her interest and gratifies him so much that to give it up arouses greatly increased fear and rage may produce an appetite disturbance in the child This is often found at the birth of a new child The older child feeling rejected and his nose out of joint because his mother seems to love the new baby more as she pays him more attention

refuses to eat the food of an older child but tries to induce his parents to feed him like a baby At times the conflict between the desire to be a baby again and to be the older child is so great that he can eat neither baby food nor the food of an older child without vomiting it Often a comparatively minor circumstance an acute illness even though mild in degree like a sore throat causes a brief interruption in the daily routine of meals The parents become upset they coax and bribe and the child finds he gains more attention and interest from not eating than from eating Hence he continues to play on their sympathies and the disturbance continues In some cases the mere cessation of bribery and coaxing cures the condition at once This gain from illness which is so characteristic of the psychoneurosis in general makes disorders of appetite in children so hard to treat The parents give them so much more if they are sick than if they are well that it hardly seems desirable for the child to recover Particularly is this so when the child s feeding problem allows parents a certain relief from their own inner anxieties

Also there is in the mind of every child a very close connection between ideas of eating the use of the mouth and loving This is commonly found even in adults kissing etc and anyone who has had the opportunity of being very closely associated with a small child will recognize this close connection One child said I wish you were sweet lamb chops then I could eat you all up

Not only does feeding establish a unique relationship between mother and child but the fact that the mouth activities serve two functions (1) eating for the purpose of maintaining life (2) sucking biting and chewing for the purpose of obtaining pleasure is basic for the observation that a disturbance of the second function often manifests itself by dysfunction of the first All children suck for pleasure but there are individual differences in the degree that children engage in this activity Some begin very early to be very persistent in sucking so that they scarcely cease from sucking while awake others begin late and carry on the activity more intermittently and less frequently

Pleasure sucking therefore bears a close relationship to eating and because of this affinity interference with one process may spread to interfere with the other This may be observed during the weaning process Some children refuse the new method of feeding bottle cup and spoon etc and the new articles of diet more or less vigorously and consistently Only after much crying fighting and hunger do they compromise with the new method At this time they appear restless irritable ill humored they fall easily into fits of crying and sometimes seem really depressed and sad Occasionally their apathy goes so far as to refuse nourishment entirely This indicates that they have come to regard feeding not as a process to satisfy hunger only but very largely as a process of obtaining sucking pleasure i e the pleasure element is

very great and they fight all efforts to make them relinquish it, even to the point of disregarding hunger or even of vomiting, rejecting the food given them through a disliked method

Given, therefore a child, who perhaps has a constitutional predisposition to extract a great deal of satisfaction out of pleasure sucking and subject him to certain over early over severe or badly managed methods of weaning such as may occur because of illnesses developmental disturbances or unfavorable conditions of nourishment with weaning he may develop a nutritional neurosis whose mechanism seems to contain the following factors (1) a protest against his being weaned (2) a retaliation on the people who weaned him

It may be said then that measures which tend to terminate too early or too abruptly the customary periods of pleasure sucking stimulate hostile and adverse emotional reactions which may be exhibited directly in behavior and indirectly through upsets of gastrointestinal tract

In the older child this equation between eating, loving and pleasure sucking produces certain ideas and thoughts which often are unpleasant and disgusting to him The disgust however may apply not only to the ideas but may spread over to the eating function itself so that the child refuses to eat or else expresses his disgust by vomiting after he has eaten Thus his first introduction to sexual matters may be met with a disturbance of appetite Ferenczi[4] mentions a case of a boy who suddenly would not eat his breakfast Investigation of the case revealed that shortly before his trouble started the boy had learned about intercourse He could not tolerate consciously this idea because of his feelings of love and respect for his mother whom he refused to believe could do such a dirty thing However he transferred his disgust from her to the breakfast which she had prepared with hands soiled by the intercourse of the previous night

Thus three factors must be considered in every disturbance of appetite 1 The child s instinctual desires and needs his feelings and his thoughts 2 The use the child is making of his appetite to work out these emotional problems 3 The attitudes and emotional reactions of the parents to the child and the reasons and basis for their attitudes and reactions

Treatment therefore must consider these complex interrelationships Certain prophylactic measures are important First, the general atmosphere of meal time whether for the baby or older child should be as free from stress and strain as possible The dinner table should not be the place to air all the troubles of the day or the misdemeanors of the child Neither should deprivation of food be used as a punishment Too great insistence on table manners is unnecessary The child learns his culture through example and not through precept It seems more advisable to trust to the child s appetite than to demand that he consume a definite amount of food at a given meal because such

demands grow quickly into a quarrel whose result is more detrimental to the child's health than a small meal Second weaning should not be a sudden process The recent pediatric method of beginning various foods early and introducing them slowly has sound psychological basis The older child should be introduced to new foods gradually and without undue fuss Too great stress cannot be placed on the need for the optimum period of breast feeding in every case

When an appetite disturbance has developed one must study first the food routine of the family and the daily routine of the child If this seems objectionable it should be changed Often with a younger child it may be desirable to have him take some of his meal away from home e g at a nursery school All such measures well known to pediatricians relieve only those cases where the etiology is based on the child's irritability from poor hygiene They fail miserably in the vast majority of cases because they do not touch the real problem the emotional relationships between the parents and the child If the relationship has been disturbed temporarily by such occurrences as the birth of a new baby measures which will alleviate the jealousy situation and the adjustment through the passage of time will remove the difficulty The passage of time and considerate handling will be adequate also for the child whose feeding problem represents his mourning for the loss by death or separation of a loved or hated parent guardian sibling or friend If the feeding problem represents the reaction to more subtle disturbances in the emotional relationships these must be carefully studied and corrected With many of these cases however the real situation is known only to the child perhaps unconsciously and therefore analytic therapy is necessary This is illustrated interestingly by the case of an adult man whose childhood from seven to twelve was consumed by a feeding problem and by disagreeable moody behavior The cause of this was not known at the time nor was he aware of it retrospectively Through analysis it was learned that the condition was a reaction to his intense fear lest his mother of whose affection he was unsure should have another child and he would be rejected completely His fear was brought to a climax when at seven his mother developed a uterine condition which was operated on and in his partial knowledge he thought her hospital sojourn must have been a confinement He spent the next five years worrying as to the whereabouts of the new baby to such an extent that he could not eat Feeding problems are challenging situations and all too few have undergone a complete enough investigation to speak too dogmatically as to their etiology and dynamics It is to be hoped that in the near future adequate studies will illuminate their many complexities

(*b*) *Disturbances of the Function of the Lower Gastrointestinal Tract* —The lower gastrointestinal tract presents many psychological disturbances in child

hood Fear and anxiety may increase the rate of the secretory and motor activities *resulting in diarrhea and depression and despondency retard it* resulting in constipation The most common disturbances however, are those that effect the control of the anal sphincter *This may result in incontinence* and soiling or in constipation The control of the sphincter is not innate but is acquired through training As has been stated above *there is an instinctual* urge to obtain pleasure from bowel movements and to retain the control of his bowel activities Both of these urges come under the ban of education The child must learn not to get his pleasure from bowel movements and must learn to control his motion not at his own will but at the dictates of society Further this control although imposed at first from without must become part of his psychic structure i e it forms the nucleus of his superego Thus training in cleanliness to be successful must follow the lines of the superego formation The child relinquishes his pleasure in his movements and his retention of control over them in return for the expectation that his mother will love him more If the emotional relationship between mother and child is adequate, the former need apply only minimum training methods The child is sure already of her love seeks more of it and being already certain of compensation can relinquish his physical pleasure Also such a mother neither inaugurates training too early nor proceeds about it too drastically She is content if the child is bowel trained between eighteen months and two years and bladder trained by three years Thus the child experiences the optimum amount of bowel pleasure and can pass on to the next stage of his development with precision Difficulties in bowel training arise from two sources, first either over accentuation on the importance of cleanliness by the parents or parental rejection manifesting itself in regard to training methods second, constitutional accentuation of the pleasure in anal activities That such exist is well *substantiated* by the fact that in certain families all the children are difficult to train and that bowel disturbances seem to run in families just as urinary *and oral difficulties* do If the methods of training are imposed too early or too rigorously, the child may suddenly accept them and become clean with *the result that he gets* the idea that all bowel movements are wrong and that he must not move his bowels anywhere lest he be punished Consequently, *when he has the desire* to defecate he attempts to inhibit it and when the need becomes too great to be inhibited he moves his bowels acting as *if he were in great pain or fear* When his parents finding that his bowels do not move every day, proceed to give him laxatives he refuses to take the medicine *often complaining bitterly* of its nasty taste but acting as if he were afraid to take it as he really is because he knows it will move his bowels and he *considers this to be wrong* One boy would go for perhaps ten days without a motion Although he was placed on the toilet daily and appeared to try to move *his bowels, there was no*

result except that he appeared to be in great pain When his bowels did move the stool was not a constipated one and his shrieking with what seemed pain was really fear This fear had several components He had been rigorously toilet trained to the point where he began to think of any bowel movement as wrong and displeasing to his mother He was unsure of her affections and had been made very unhappy by the birth of a younger brother on whom the mother lavished attention It is not clear why his jealousy of his brother was connected with his ideas about defecation but he stated if he moved his bowels he made new babies in the toilet and then killed them by flushing them away

A girl of two-and a half developed a sudden fear of going to bed This fear when studied was found to be one of lying down i e she was afraid to lie down and relax in sleep lest she soil the bed Because of their great interest in bowel activities children develop many curious notions about the process ideas which are closely akin to the ideas of primitive man Often they regard the feces as part of themselves and fear that if it is removed from their bodies and flushed down the toilet it has been killed and they have been injured Children with such ideas show a fear of the water being flushed or can defecate in a pot but cannot do so in the water closet The presence of many and to the adult perfectly ridiculous ideas about feces and bowel motions coupled with marked fears which would be justifiable if the ideas were true renders the prophylaxis and treatment of chronic constipation in childhood a serious matter The child is interested enough in his bowel activities and if the parents are also greatly interested constantly impressing on him the importance of regularity inquiring daily if his bowels have moved and regarding any divergence from routine of bowel activities as the cause of all the child s difficulties and illnesses the child s interest and attention will be retained longer at this level of development than is desirable with disaster to his future development The father of one little girl was obsessed with the idea that intestinal intoxication was the cause of all ills When his daughter at six months developed a slight pain in her leg he treated it by daily enemas which were continued for months after the pain ceased The little girl soon developed a need for these enemas and the associated pleasure attached and was constipated without them When she became five or six years old even if she had had her enema she would develop a pain if her father had an evening engagement knowing that then he would stay at home to attend to her bowels Thus all the mechanism was laid for a situation such as described by Alexander where an adult woman suffered from severe constipation as soon as she felt her husband was not sufficiently interested in her but had a normal movement when he brought her a bouquet of flowers Functional constipation is increased if along with the attention to bowel activities suppositories and enemas which in themselves give a pleasurable feeling to the anal mucus membrane are administered

The practical management of constipation in childhood must take into consideration the strange and bizarre ideas associated with bowel function the use of the bowel to control and master love relationships and the actual physical pleasure of the activity No more stress than is absolutely necessary should be placed on bowel function and the parents of young babies should be weaned from the prevalent idea that every imaginable physical disaster is the result of intestinal stasis They should receive also careful instruction in the proper time and method of bowel training Enemas and suppositories should be prescribed as little as possible If these suggestions could be carried into effect much of the constipation of childhood would disappear If chronic constipation has developed then due consideration must be given to the child's previous training and to the emotional attitudes within the family Correction of these if possible will not only improve the bowel habits but will also lay the basis for a more adequate life in the future

Another disturbance of bowel function is soiling This can hardly be considered a disturbance before the age of two years After this age it is of two types (1) that which is continuous from birth and has never been controlled by training, (2) that which has recurred following a clean period In all such cases, of course, organic conditions have to be excluded but these in my experience are rare In the first type training methods may be unsuccessful for much longer than the usual time because the child is of the constitutional type who gets much pleasure from bowel activities In these cases patience rather than the application of more and more severe training measures becomes the desired treatment If in such a case the child's constitutional disinclination to be toilet trained is met by extremely severe training disastrous results may follow A girl of eight was referred because she did poor school work could not play with other children disliked to eat unless given only chocolate milk shakes, dreaded to get her hands dirty and seemed perfectly content to spend her recreational hours tearing newspapers into tiny pieces and piling them under a chair She was over-clean and fastidious for her age It was found that her school work suffered through slowness caused by a painfully anxious desire that everything be meticulously neat that her play life suffered from the same reason she could not bear to get the least dirt on her hands, and that her food difficulty was an imperative desire to get her mother's attention She showed a fear of the loss of her mother's love and a concern only with the question as to whether she was clean She was a difficult training problem until well past the age of three The mother used all methods of training unsuccessfully until in desperation she rubbed the child's face in the feces From that time the child was toilet trained but her personality difficulties began centering as stated above around a painful need to be clean These difficulties and their interference with her success socially and educationally and her happiness could

have been avoided by a little more patience in her training In many cases of soiling there is definite evidence of lack of parental love for the child The soiling becomes a method of attracting the parents attention and of spiting them Starting on such a basis soiling itself continues the difficulty between the child and the parents and the conflict situation by its increasing intensity keeps up the soiling

The second type frequently occurs when the child's life becomes disrupted by some external event A severe illness which necessitates hospitalization a change of homes the apparent loss of parental love due to the birth of a new sibling often cause a recurrence of incontinence It is a common experience for foster mothers to find that a well trained young child loses all his training when placed in the new home only to become clean again when he starts to be fond of the new mother The child suddenly deprived of his routine security and the evidences of his parents affection regresses to the more infantile method of obtaining pleasure from the uncontrolled bowel function A seven year-old boy following a change of residence a change of schools and the advent of a new maid began to soil himself daily on the way home from school He had shown a mild upset due to the change but this upset was greatly increased by the maid's hostile cruel and unceasingly reprimanding attitude to him He soiled partly as a sign of his upsetness and partly in rage at the maid's treatment As soon as the maid was replaced the soiling stopped

(c) *Urinary Dysfunction (Enuresis)* — Properly enuresis should be defined as a disturbance of the mechanism of voluntary bladder control This condition is extremely common in childhood in frequency being second to feeding disturbances Enuresis may be classified either according to the time of its occurrence i e whether nocturnal only diurnal only or both diurnal and nocturnal or according to its duration i e whether persistent from birth or recurring after successful toilet training It is important to recognize that toilet training may take some time and therefore a child should not be considered to be enuretic under three years of age Most children are dry in the day time a little earlier than this Nearly every known condition of the urinary tract of the conduction paths of the central and autonomic nervous systems and of the general bodily health has been incriminated as an etiological factor indicating that actually little is known as to the true etiology For the purposes of this article a consideration of involuntary voiding due to inflammation of the urethra and bladder and to gross lesions of the pathways of the central nervous system has been excluded These are rare and easily diagnosed the enuresis being only a minor symptom Localized inflammations of the urinary tract such as verumontanitis and prostatitis are extremely rare in children and produce extreme urgency and frequency in adults but not enuresis Disturbances of the general bodily health from infected tonsils teeth intestinal

parasites, etc may be found in enuretics, but they are found as frequently in children who have not the urinary symptoms and, therefore, are probably more associated conditions than etiological factors Neither does it seem probable that a change in the specific gravity of the urine can be responsible for the non enuretic child with an overfilled bladder usually will wake to void rather than wet the bed or his clothes involuntarily

The typical case of enuresis presents the following picture The child without the distress of urgency and with urine of a normal chemistry wets his clothes during the day or the bed at night, does not suffer any discomfort in holding his water and shows no physical reaction to the act but only a sense of shame in having violated a social custom The empirical results of treatment are as varied as the etiological factors usually assigned In one child the enuresis stops after the reaction of the urine is changed, another responds to atropine or its derivatives a third ceases to be enuretic after a visit to the doctor although no treatment is instituted a fourth responds to limitations of fluid intake in the evening a fifth to a tonsillectomy, a sixth to hospitalization while a seventh continues to be enuretic in spite of any or all of these measures

From a scientific point of view neither the etiologic factors mentioned or the bizarre and varying results of therapy can be explained, and therefore, it must be admitted that the etiology is still extremely obscure Certain facts however have been ascertained with some degree of accuracy First, enuresis occurs in families Certain families never have any cases nor much difficulty in toilet training the children while in others every or many members present this condition Second persistent uninterrupted enuresis is found more frequently in individuals that come from a low economic status and whose level of intelligence is less than the average Third, enuretics, who have never been toilet trained successfully, show often an ineffectual type of personality Fourth enuresis in the vast majority of cases ceases spontaneously at puberty Fifth loss of voluntary sphincter control will occur under stress and strain particularly in situations that are frightening Sixth often the enuretic dreams he is urinating but is passing his urine in the manner customary to that of the opposite sex, e g a girl dreams that she is urinating standing up and wakes to find she has wet the bed or a boy dreams that he is urinating sitting on the toilet as he seldom does in his waking life

As the voluntary control of urination is a social custom and not an innate organic need it seems probable that we must look for the source of the disturbance of this custom in the sociological and psychological fields rather than in the organic, and our question must be not what has gone awry with the child but what has gone awry with his training As in only a small number of cases have the actual methods of training or the psychological life of the

child been thoroughly investigated despite the great number of cases it is necessary to rely on these case reports and what is known about the development of the child for the discussion of our knowledge of the etiology There is first the type of case extremely common but seldom seen by the physician in which the toilet trained child starts to wet himself either at night or in the daytime but usually the former Study of such a case will show that the enuresis follows an upsetting experience A boy of eight toilet trained for years moved from one neighborhood into another The move interrupted his entire social life and necessitated a change of schools For the first few days in the new neighborhood he was restless and upset and wet the bed two or three times As soon as he had made new friends and had adjusted to the new school the wetting stopped A girl of five wet and soiled herself a number of times on the afternoon following her discovery of the body of a dead man In both of these cases the wetting could be attributed to an immediate fear situation which caused the child to return temporarily to the condition of the infant and seek once more to obtain pleasure in an infantile manner Why this girl reacted to fear by wetting rather than some other way is not known It is well known that foster children frequently start to wet when placed in a new home ceasing after a few days to several months Here again the same mechanism seems at work i e a sudden fear experience or deprivation resulting in a temporary attempt to adjust by returning to an infantile pleasure situation

The second type of case perhaps more fully studied than the others is that where a toilet trained child suddenly relapses for a period of months or even years Such cases have been studied both in children and retrospectively in the analysis of neurotic adults In one such case a little girl began to wet herself following an assault by a man She had been frightened and hurt genitally and been afraid to confide in anyone She thought that the assault had injured her genital region permanently and henceforth she would have no method of controlling her excretions In the cases of adult neurotics who gave a history of enuresis in childhood the situation is usually as follows A young adult girl revealed during the course of her analysis that she had wet herself at night and sometimes during the day from about the age of seven to twelve About the age of six she had begun to masturbate very frequently as a result of the death of her grandfather whom she loved dearly and the birth of a younger brother who usurped her position in the family Her masturbation phantasies were concerned with a feeling of deprivation by her father who had shown his preference for her mother by impregnating her and by her grandfather's death and with an extreme feeling of hostility to her mother who had become objectionable to her by spending so much time with the baby and by presuming to be favored by the father She was observed masturbating and

severely reprimanded by the mother, and the masturbation stopped It was replaced immediately by the enuresis In this case the enuresis represented the masturbatory activity in a form more tolerable to herself, i e, she might be punished for the masturbation but she could not for the enuresis, which obviously was not her fault The enuresis, therefore was her way of expressing her need for the father s affection and her resentment against her mother and was an extremely infantile equivalent of masturbation In my experience most cases of enuresis occurring after a dry period are the infantile equivalent of masturbation which has been stopped either directly, or because the accompanying phantasies were too painful Here again the enuresis simply expresses the child s attempt to deal with a painful and disappointing situation in his life by altering the even course of his psychosexual development Behind both diurnal or nocturnal wetting of this type lie concealed strong feelings of antagonism and revenge against the parents and such a situation, if left unaltered is bound to effect far reaching distortions of the individual s ability to adjust to relationship with other people in his adult life even if the enuresis has long since ceased to exist

About the third type of enuresis that persisting from birth little is known definitely In some cases it seems to result from a lack of any real attempt to train the child or from the lack of adequate toilet facilities so that the child has to get up in a cold dark room and use a vessel from the use of which he may be inhibited by a sense of the shamefulness of this procedure or have to go some distance through cold dark passages pursued by his own fears of the dark It may also result from the ignorance of the parents that the bladder capacity of the small child will not permit him to retain his urine many hours This seems to be the reason for the greater tendency of enuresis to occur during cold weather and among poor people of low intelligence In other cases the parents more frequently the mother derive unconscious pleasure from cleaning up after the child preferring him to be a baby as long as possible Such a mother although she said she was worried by her son s enuresis practically refused to do anything about the condition until it stopped of itself during puberty In other cases the child continues to wet in order to continue his infantile pleasure because the severity of the father renders his progress in development difficult This is the type of case whose enuresis is simply one symptom of his unsuccessful personality development Another type occurs in the very rejected child the severity of whose rejection has prevented his love for his parents developing to the point where he wishes to imitate them by being clean Such children will develop bladder control late in childhood but will show soon the signs of a delinquent personality which will be discussed later

The treatment for enuresis then will not be the simple matter of prescribing limitation of fluid intake, the waking of the child at frequent intervals during

the night the prescribing of atropine pituitary or alkalies or punishment but will depend on the findings of the study of the total life of the child For those whose enuresis seems the result of improper or inadequate training methods simple rules should be established The child should empty his bladder before retiring He should be thoroughly waked and taken to the toilet once or twice a night and the toilet facilities should be made as comfortable and convenient as possible Adequate praise should be given for every successful attempt at control and neither shame nor punishment should follow lack of success Such a program continued consistently for several months should result in success For those cases where the enuresis is but one symptom of a defective relationship between the parents and the child training methods are valueless The relationship itself is the etiologic factor Where the enuresis continues because the child is babied the situation is not as harmful as where it follows parental rejection In the second type mentioned above i e recurrent enuresis it is a symptom of a neurosis and the neurosis rather than the enuresis demands treatment In the first type little more than the passage of time an increase in the warmth of the adults attitudes whatever slight adjustments in the strain of the situation can be made and a friendly understanding discussion of the frightening situation are necessary

It is regrettable that physicians so often undertake treatment of a painful and frightening nature rather than attempt to understand the cause of the enuresis Operative procedures cystoscopy circumcision unnecessary tonsillectomy prostatic massage meatotomy are undesirable in any child unless specifically indicated and in the enuretic whose wetting may be the result of a fright whose existence is unknown to anyone but the child or of harsh parental behavior, or of uncertainty as to the future because of parental maladjustment, they serve only to increase the fear and insecurity and while the symptom may cease as a result its place will be taken by more severe personality disturbances which will damage the individual s entire future life

2 *Obsessional Compulsive States* — Hysterical states may develop at any time during childhood but obsessional compulsive states are not found before the latency period although the mechanisms involved are seen much earlier The symptoms are little different from those found in adult obsessional conditions and it will suffice to describe two cases

CASE 1 A boy of thirteen was brought for examination because he made curious signs in the air with his fingers Stretching his arm out he would apparently write something in the air If this movement were stopped he would become restless and anxious the anxiety disappearing when the inhibition was removed Despite the ridicule that he incurred from his associates he continued the movement He did not get along very well with other boys avoiding those of his own age and acting in a teasing irritating manner to those older He had no

contacts with girls His school work was fair but not at the level to be expected from his I Q Toward his parents he had a teasing disagreeable manner and quarrelled with his mother

CASE A ten year old boy was unable to pick up or touch anything unless he first licked it His outstanding behavior trait was his tendency to place himself in dangerous places He spent much of his time annoying automobile drivers and climbing on dangerous roofs Nothing his parents could say or do seemed to affect this behavior and consequently they were in a constant state of anxiety lest he be killed

These two cases show the typical compulsive motor acts, which are such prominent symptoms in this condition Obsessional thoughts are also common

CASE 3 A girl of eleven was troubled with the obsession that her mother might die and had to shield herself from these ideas by constant prayer for her mother's safety

CASE 4 A girl of fifteen had the compulsive need to suck her thumb If she did not do so very unpleasant thoughts came into her mind and in order to avoid them she was willing to undergo the ridicule to which the thumb-sucking subjected her A similar type of compulsion occurs in certain forms of delinquency

CASE 5 A boy of sixteen had suffered for several years from a compulsive form of stealing As he described it he would wake one morning not feeling well, apparently with considerable anxiety, toward the end of that day or sometime next day he would begin to feel a temptation to steal For perhaps a week or ten days he would battle with this temptation, until his conflict would interfere with both his appetite and his sleep When the desire to steal became uncontrollable, he would do so He usually stole money, although there was no financial need neither did he spend the money after he had stolen it Although he was highly intelligent he stole in such a stupid way that usually he was caught and punished As soon as he was punished, he felt well, had no more anxiety and was untroubled with any desire to steal for several months Then the whole process would recur

In each of these illustrations the outstanding symptom is an act or an idea that is perfectly senseless bizarre unproductive and often detrimental to the actor's happiness but which the individual is compelled to perform even against his wishes If the act is inhibited he develops anxiety often severe In case 1, the scribbling in the air represented the profanity depicted in the funny paper as ? * ? The patient a very moral boy at this time, never used profanity, but when he was very small he taught his younger brother to swear in order to get him punished Consequently the scribbling in the air represented hostile aggressive wishes toward the brother, which his conscience would not permit him either to carry out or contemplate In all such cases there is found first a desire to do something which is prohibited The desire

is suppressed but remains active and expresses itself either in a distorted unrecognized form or the child uses some other activity to prevent him performing it In case 2 the boy could not touch anything because his earlier masturbation had been severely punished Consequently to touch was to masturbate and he could only perform touching if he had first licked the object i e as a spell to remove the masturbatory element in the desire In case 3 the girl first was conscious of the repellent wish that the mother who angered her would die and then she endeavored to prevent the result of her wish by her compulsive prayers Case 5 resembles case 2 The boy had been taught to steal at the same time and by the same group that initiated him into masturbation The punishment for stealing (whipping) was much less severe than that threatened for masturbation (insanity) Whenever he felt the inclination to masturbate he could not carry it out or even think about it because of the serious consequences Therefore instead he had the impulse to steal i e the desire to masturbate was displaced on to the stealing which to him was the less serious crime

It is very common for a child or even for an adult to attempt to express prohibited instinctual urges by performing their opposite The very dirty child often becomes over cleanly the cruel child becomes an antivivisectionist the belligerent one a pacifist just as the adult alcoholic often becomes an ardent prohibitionist Within reasonable bounds this is unobjectionable but the violent expression of one activity simply means the powerful inner urge underlying its opposite and when the openly expressed activity becomes so bizarre and forceful as to interfere with the individual s happiness it becomes pathological and requires treatment

In most cases of obsessional states the compulsive activity represents the opposite of some powerful inner impulse of an asocially aggressive nature i e an undesirable manifestation of the aggressive instinct (Todestrieb) and results from oversudden repression and inadequate sublimation of aggression because of one or more severe traumatic experiences in the child s life This leads to two practical considerations First the training of the child should be directed much more toward helping him to adequate sublimations of his aggressive desires physical and intellectual competition such as boxing wrestling games etc with much encouragement to put every effort into socially acceptable forms of rivalry than toward suppressing forcibly the aggressive instinct in its usual manifestations cruelty destructiveness jealousy etc If the latter manifestations are gently restricted and permitted with a few gentle restrictions the child in an emotionally stable home without any special training will teach himself to sublimate them and will have little need to call upon the obsessional mechanisms to control them

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Sometimes the child cannot dissipate energy because there are real prohibitions against his motor activity The parents may desire a child only as an ornament to sit in a corner and do nothing and more or less severely reprimand him if he plays too actively For such a child whose other activity is forbidden there remains no outlet but restlessness Such cases are not common however More commonly the parental prohibitions have been placed on specific childish activities which in most civilized families are usually sexual notably masturbation Either there are actual restrictions present or the restrictions placed earlier have become so incorporated in the child s superego that such activities are totally prevented Energy developed in the service of sexuality as a general rule requires dissipation through sexual activity A portion of it can be utilized in non sexual ways but only a portion the major part requires the proper outlet In the situations from which tense restless children come there is usually much conflict with the parents The child is unhappy and insecure in his relations with them Such insecurity predisposes to autoerotic pleasure masturbation These activities stimulated by the parental indifference are by the same indifference associated with phantasies of a very painful nature The child attempts therefore to give up the activity in order to get rid of the phantasies Also in such circumstances sexual activity usually is strictly taboo Stimulated by his situation toward autoerotic pleasures and unable to gratify his masturbatory desires because of fear the child is caught in a situation of great internal tension and attempts to relieve himself by incessant purposeless neuromuscular activity which is sexual in character but displaced from the genitals to the general muscular system

That this general restlessness represents a prohibited masturbation is recognized by parents although they are not aware of it consciously They are so terrifically disturbed by restless children One mother has attacks of great anger and irritability if her son stands in front of her wringing his hands and grinning There is nothing in the son s posture or in his behavior to justify the mother s great annoyance and consequently one has to look on her reaction as a conscious reaction to some unconscious thought She herself has inadequate sex life and is unconsciously concerned with the idea of masturbation which to her is a great sin When she observes her son in this posture it makes her begin to be a little more aware of her own masturbatory desire through a very marked identification she has with the boy That is unconsciously she recognizes the masturbatory element in his behavior and becomes angry lest she herself fall into the same temptation There is perhaps no part of infantile sexuality which is the cause of so much parental concern as genital masturbation and parents who unconsciously recognize the masturbatory basis for the child s restlessness act toward it in the same way they acted toward his earlier masturbation

should be understood that the child is very ill Individuals can get along in life with conversion hysteria and not have too much difficulty, but there is a distinct tendency for the obsessional to become more and more ill Furthermore, if he should become the parent of a child that child's upbringing is going to be pathological and the child probably will become ill

The treatment for obsessional states at best is very difficult, and the prognosis is not always good No attempt should be made to temporize with adjuvant measures as the only treatment that has a chance of satisfactory results is analysis

III *Disorders of Motor Activity* —This group includes 1 General muscular restlessness either of the large or small muscle groups or both Such cases are frequently referred to as choreoid 2 Convulsive disorders 3 Tics proper i e rapid rhythmical movements of specific muscle groups, such as blinking nodding etc 4 Habit movements, thumb sucking nail biting and other irrational movements that appear to be purposeful but lack the purpose, such as head banging rocking, etc 5 Motor speech difficulties, stuttering and speech defects

1 *General Muscular Restlessness Nervousness Choreiform States* —This condition is too well known to need a lengthy description The child is continually on the go If ordered to sit still he moves restlessly, plays with his fingers grimaces etc Such cases are difficult to distinguish from chorea In fact the statistics on the frequency of chorea are often misleading because they include cases of chronic restlessness Unquestionably general muscular restlessness is much more common than true chorea but with care the diagnosis can be made in most cases Chorea is an organic disease of an infectious nature and its symptoms are organic The movements are of the nature of a coarse tremor, i e a rapidly repeated rhythmical movement and involve the small muscle groups of the extremities principally They give an impression of purposefulness for the muscle group but not the purposefulness of human activity They are accompanied by muscular weakness usually one sided and easily demonstrated and usually by cardiac weakness General muscular restlessness is by its nature symptomatic of the fact that there are not enough avenues of discharge for the energy developed by the individual In this the child with chronic muscular unrest seems to resemble the hyperactive child, who is hard put to give expression to his abundant energy Hyperactivity is probably a constitutional trait because children differ in utero in their muscular activity some fetuses being very active some very quiet The hyperactive child has much to do while the chronically restless child is by no means always hyperactive As stated above the symptom indicates that the energy developed in the body is not being dissipated in work i e that the usual avenues of discharge are not being utilized or cannot be utilized, and the child is under tension

has suffered severe deprivations or has been starved for affection In connection with breath holding it should be remembered that children in an attack of rage and disappointment very often play with the idea of suicide by holding their breath until they die to punish the disappointing adult *It seems probable that a similar mechanism underlies the breath holding attacks of even young infants* Hysterical convulsions occur in childhood as they do later in life The diagnosis and treatment is the same as for adult hysteria

3 *Tics* As stated above general restlessness represents the displacement of prohibited masturbatory activity from the genitals to the general motor system In tics the masturbatory desire has been displaced more specifically to definite movement

A boy of ten *had the habit of blinking his eyes consisting of attacks of rapid rhythmic closing of the eyes* Sometimes the *movement spread to the* other facial muscles He was obsessed by a very great fear lest his eyes be put out and talked continuously about objects from the standpoint of whether they would or would not injure his eyes He feared injury to his eyes because several times in punishing him his mother had hit him in the eye He was extremely interested in observing people's bodies particularly the bodies of girls and through his peeping *habit* on a *number* of occasions had observed *parental intercourse The tic started very shortly after he had ceased mastur*bation because of parental threats It seems evident then that ideas of sexual excitation of looking particularly at sexually stimulating objects and of fear of injury if he attempted to obtain gratification for his sexual tension were all combined in the tic action It represented a group of ideas about looking he wished to look particularly at sexual things and much that he had seen had been unpleasant and frightening he had seen his sister's genitals and wondered *how she had become so mutilated From his observations of intercourse and* from the constant serious parental quarrels which made him feel that his father could only be cruel to his mother particularly as the latter complained constantly of the former's cruelty he had concluded that the man injured the woman very severely and made her so ill she had to go to the hospital This was based on fact because the intercourses he had observed had been shortly *before the mother's hospitalization for her confinement with his brother which was just before the tic started He loved his mother but was afraid that if he* expressed this love he would hurt her as the father did and perhaps drive her away He had some validity for this belief because in her frequent quarrels with her husband his mother frequently packed her grip to go away and the boy really never knew when he came home from school whether she would be at home or not The same group of ideas occupied his mind when he masturbated and their unpleasantness *served* to bring his masturbation to a close especially when to them was added the parental threat that *if he continued*

As much of the general or localized motor unrest under consideration represents a displacement of prohibited infantile masturbation, the question of general therapy for these conditions may be discussed here The specific questions that must be considered are first when and under what circumstances and by whom was the child's psychosexual development disturbed? Second in what way have the parental attitudes increased unduly the need for autoerotic gratification? Third, how can these attitudes be altered so that the usual course of development may be resumed?

The parental attitude is usually one of rejection, which has overstimulated the child's autoerotism and at the same time made it impossible for him to gratify it lest he offend the rejecting parents to the point where they may reject him totally and he may die He thus attempts to make himself secure with his parents by damming up his autoerotism, which then proceeds to overinnervate the general muscular system giving him extreme restlessness If it is possible to alter the parents rejective attitude, the second problem may be approached an attempt to inculcate in them and in the child either directly or through his parents a better understanding of and a healthier attitude toward masturbation Particularly with the child this must be approached gradually and carefully by developing a feeling of friendship and confidence, then getting him to discuss his ideas about masturbation, the phantasies which accompany it and the source of his ideas and only then gradually correcting his erroneous notions This is a difficult and delicate procedure and probably should not be attempted by anyone who does not understand children well, and whose own ideas about masturbation have not been freed from the notions he has built up during his own childhood Treatment by rest, sedation and change of environment should only be used when the former type of therapy cannot be employed and at best is a poor substitute Punishment is extremely detrimental and of course only increases the disorder

2 *Convulsive Disorders* —The usual convulsive disorders are organic in nature epilepsy and tetany and therefore will not be discussed here One point in differential diagnosis is important A girl nine months old was referred because of a curious syndrome At any time but more commonly if she were annoyed she would forcibly extend her legs and stiffen her body, pressing her thighs tightly together, slowly extend her arms above her head, become very flushed and after retaining this strained posture for a few seconds, relax, break into a sweat and frequently drop off to sleep Many elements in the attack seemed to resemble tetany but it was really a marked form of infantile masturbation

Semiconvulsive actions and attacks of holding the breath, found particularly in babies and younger children are rage reactions to deprivations A child who shows frequent and marked temper tantrums is always one who

has suffered severe deprivations or has been starved for affection In connection with breath holding it should be remembered that children in an attack of rage and disappointment very often play with the idea of suicide by holding their breath until they die to punish the disappointing adult It seems probable that a similar mechanism underlies the breath holding attacks of even young infants Hysterical convulsions occur in childhood as they do later in life The diagnosis and treatment is the same as for adult hysteria

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to masturbate his penis would be cut off As his eyes had been the avenue through which the sexual stimulation and the associated unpleasant ideas had come, he endeavored to be blind to the whole situation, and whenever he was sexually stimulated or had the desire to peep he tried to fulfil the biblical injunction If thine eye offend thee pluck it out , i e , he blinked as if he had no wish to see Although I could not discover it in this case, I am of the opinion that the reason for the location of the symptom in the eyes was that at the time when the suppression of masturbation and peeping occurred he actually had been threatened with or had suffered some injury to his eyes

It seems in most cases of tic that there has been at the inception of the movement an actual reality need for the movement but the reality need is reinforced by the current psychosexual situation and the psychosexual situation remains fixed at this point The tic operates as if the psychosexual situation were the real danger rather than the danger to which the individual had actually been subjected

A boy of thirteen would jerk his head upward and to the left This had many psychosexual components but in reality represented an attempt to withdraw his head from being slapped and also an attempt to withdraw his head from the approach of a train At the age of five he had been pushed on the tracks in front of a train He had been hurt and was only rescued from being run over in the nick of time The tic represented a movement justifiable in the then actually dangerous situation but has continued because the psychosexual situation at that time was also dangerous, and he now reacts in his psychosexual life as if it contained the danger by which he was threatened by the train That the danger at the present is an internal one is evidenced by the fact that any inhibition of the movement results in extreme anxiety

Tics are notoriously difficult to treat for the reason that although the psychosexual life may be fairly well worked out and many of the repressions and inhibitions removed one of the main repressions has centered around the actual reality situation where the tic began and this is difficult to relieve It is often necessary during treatment for the patient to inhibit consciously the movement and this is extremely difficult for a child because it produces great anxiety The child is less able to tolerate this anxiety than he is the constant ridicule of his companions and constant admonitions from his parents to which the movement subjects him Of course there is a large element of secondary gain, i e the movement itself has become useful in attracting and holding the attention and interest of the people whom the child loves There is little to be gained in treatment by measures habit training etc , which are directed toward the symptom It is true also that children very often drop the tic with such treatment or even without any treatment This does not mean that the child has improved It simply means that the psychosexual conflict

has taken another course and has probably resulted in marked alteration of the character by which the tic movement becomes unnecessary but the last condition of such a child is worse than the first For the differential diagnosis organic spasms and tremors must be excluded Actual eye defects causing photophobia may produce spasm of the lids but if only minor visual defects are found it must be remembered that minor eye difficulties are found frequently in children who do not blink and perhaps not any more often in cases of eye blinking so that one must be careful in surmising that the child s vision is the cause of the tic The most desirable treatment for tic is an analysis but analysis cannot be regarded as a panacea because the prognosis is not universally good

4 *Habit Movements* —Young children often show chronic rhythmical muscular movements such as rocking head banging rolling etc One child of six had a history of wakefulness at night for many years She would wake up after she went to sleep sit up in bed sing and either bang her head against the crib or rock herself rhythmically Another child rocked and banged so forcibly that he nightly could make his crib travel from one side of the room to the other In both cases and in other cases of such behavior the movement has all the characteristics of masturbation except that the genitals are not involved There is sleeplessness which indicates ungratified sexual desire there is pleasure in the movement and extreme displeasure if the movements are stopped and it usually occurs when the child has had a day with lack of emotional gratification One must be careful however in postulating that head banging and rolling in a young child particularly in the first year of life is psychogenic because it may be due to an irritation in the head which in the adult would give headache (gross disease of the ears infections or toxic irritation of the meninges) These cases however present an entirely different picture from the child which we have been discussing

Head banging often forms an intricate part of the temper tantrum syndrome In this syndrome the child is denied some gratification and becomes angry at the person who denies him the gratification but because he is unable to obtain the gratification and because he dare not express his anger directly to the disturber of his pleasure he shows violent gross muscular movements just as the young baby does under similar circumstances The phantasy behind these movements is that he will destroy the disturber and grasp the gratification regardless At this point the phantasy is met by the desire at the same time to retain the life of the disturber who is loved as well as hated and the child then begins to take out on himself his anger at the adult He will bump his head so hard that he may really hurt himself by which he is simply saying I would like to bump your head in this way but I dare not do so

Habits of thumb sucking nail biting etc are very disturbing to parents

Thumb sucking is such a common complaint that it is wise to consider it in detail As stated earlier pleasure sucking is an important developmental activity in the first year Levy[5] found that when infants were required to use too little sucking in order to satisfy their hunger, i e, because of too free flow of milk etc they tended to show greatly increased need to suck in different objects and particularly to become finger suckers beyond the normal time Also if a child has been underfed and is chronically hungry, he tends to suck indifferent objects to relieve his hunger, and this sucking will be continued beyond the normal period

Thus in the young child thumb sucking is a normal phenomena and if of an extreme degree indicates as shown above a deprivation of the oral sucking activity or lack of food As such it needs no treatment, and it is best not to do anything at all Parents have certain fears in connection with thumb-sucking which are not valid In only exceptional cases does it have any effect on the shape of the mouth or on the condition of the teeth and it only has this effect when the method of sucking is to take the two first fingers and to press vigorously outward against the upper teeth This is not very common

One will find that the parent who is disturbed about thumb sucking even though he realizes that it is neither harmful nor anything to be worried about does so because he desires to deprive the child of any outlet of instinctual gratification and that his own difficulty as a child has either been with finger sucking itself or with masturbation for he recognizes in his unconscious the relation between the two activities Consequently, if the physician is to be consistent and follow what he believes to be true he will lose a certain number of patients who are brought to him for thumb sucking, and for which the parents demand treatment It is better however that he should lose these patients than that he should add an unnecessary burden in the child s development He should of course assure himself that the child is not deforming his mouth and should endeavor to deal with any distinct causes of emotional dissatisfaction in the child s life but further than this he should not go I would not regard finger sucking as pathological even though the child continued it up to five or six or occasionally over It shows of course a very strong oral trend in the child whether a constitutional one or stimulated by the child s early experiences Also if continued to five or six it shows an interference with the child s masturbation because one would expect that by five or six the pleasure sucking would have been replaced by phallic pleasure and perhaps there would be some need to investigate this phase of the child s life Pleasure sucking which continues after this age or which starts again after having been dropped, becomes an entirely different question Here there is quite different pathology Something has happened in the child s life which has prevented the even course of psychosexual development and the child has

given up a later stage of development to go back again and pick up an earlier pleasure A girl of fifteen had sucked her fingers since she was seven She had not dared to stop sucking them because, if she did obsessional thoughts crowded into her mind and these obsessional thoughts were of a masturbatory sexual character and very unpleasant

The question of the second type of thumb-sucking which is similar to the recurrent type of enuresis is an interesting example of the primary mechanism of a neurosis namely first a deprivation of some kind in the actual present life of the individual Following the deprivation there is a withdrawal of interest from the outside world into the individual and this interest reactivates old infantile ways of obtaining pleasure In the case of the thumb-sucker this pleasure is obtained directly and so it perhaps approximates more closely a perversion than a neurosis because the neurotic desire for oral pleasure would represent itself not by an actual oral gratification but by the negative of the gratification, namely, unpleasant symptoms related to sucking such as nausea vomiting etc It can be seen therefore that the common parental attitude toward this second type of thumb sucking namely reproof and attempt to stop the thumb-sucking directly will only result eventually in some form of a more severe neurosis if the thumb-sucking is given up as a result

Treatment therefore must deal with the present deprivation and its hindrance to the present stage of psychosexual life When this has been adjusted the thumb sucking disappears automatically because it is no longer needed One of the great errors practiced in connection with habit training has been the lack of realization of the inherent capacity of the individual to develop Freud in his Three Contributions to the Theory of Sex has pointed out that the development of repressions in connection with infantile sexual pleasure seeking is an inherent thing and that these early pleasures are given up automatically when the individual is able to enter on his next stage of development As he says the duty of the educators and parents is not to initiate the relinquishment of these various infantile pleasures but simply to sharpen and make more clear cut the possibility of relinquishment Psychiatric experience indicates the validity of Freud's statement and also the validity of the fact that the danger lies not in under but in over habit training because the latter inevitably results in a neurosis The lack of appreciation of this very important dictum regarding the development of the child has placed the whole question of habit training on an erroneous basis and much harm has resulted When one realizes that such habits as thumb sucking if continued past their normal limits or if they recur after the time they have been given up are attempts on the part of the individual to make himself comfortable by re-establishing a former source of pleasure it can be seen quite clearly that the difficulty is not with the thumb-sucking but lies in the inability of the child to

make an adjustment to his present stage of psychosexual development, and that it is in this latter that the problem really lies and it is that which must be corrected

What has been said about finger sucking applies equally to nail biting In finger sucking the pleasure of the first oral stage, sucking, is continued in nail biting that of the second stage, biting Biting is an aggressive as well as a pleasurable act and is found more often in children who are smouldering with anger against some disappointment real or fancied from the parent They dare not vent this anger directly by biting the parent, as they wish to do but instead express it by biting themselves This is well illustrated by the extreme case of a girl of ten who when she became very angry with her guardian behaved very sweetly to him but bit her arm until it bled Of course if the causes of this chronic resentment are allowed to continue and there is permitted no adequate avenue for its expression the child will have adult difficulties of adjustment in his personal relationships

5 *Speech Dysfunction* —(*a*) *Stuttering* —It is interesting that the physician has lost touch with the great majority of cases of motor disturbance of speech stuttering stammering and lisping Such cases are either not treated at all, treated by parents or are placed in speech classes in the public school where treatment is carried out without regard to the etiological factor Such treatment is basically an attempt to retrain the stuttering speech and in this it resembles the usual habit training therapy taking no account either of the individual s total personality or of the inciting factors in the neurosis Stammering is a neurosis and is considered by Fenichel[6] as a pregenital conversion syndrome In the individual who stammers stammering is not the only symptom The motor unrest flows over very often into other tic manifestations and many stutterers are able to control their speech difficulties by waves of restless movements of other parts of their body Stuttering being a symptom it is perhaps first advisable to call attention to the effect produced by the symptom because in that effect lies one of the reasons for the symptom To normal people the stutterer is the most objectionable person in the world, and such people get extremely annoyed and irritated when they have to listen to him This annoyance and irritation expresses itself in ridicule teasing and in the universal desire not to wait on what the stutterer has to say but to supply the difficult words for him Many people in fact cannot even contain themselves long enough to pay any attention to the stutterer Therefore the result on the normal individual is to make him irritated as if this is one thing which the stutterer desires to do yet this is just the opposite of what would be expected from the character of stutterers who usually are very shy mild, gentle individuals who show practically no normal aggressiveness toward the world

It has been taken for granted very often that this character trait is second

ary to the stuttering that the individual feels very unhappy because of his lack of ability to communicate his thoughts and therefore withdraws more and more into himself This is only true to a minor degree because the study of stutterers show that this character reaction pattern was present even before the stuttering began Therefore the stuttering with its irritating effect to other people must be associated with the lack of aggressiveness of the general personality and so it is Speech is a means of establishing a relationship with other people and is a manifestation of aggression This is so well known that examples are not necessary except to draw attention to the very aggressive character of speech in everyday life and to the fact that many stutterers when released from their illness show an actually opposite personality trend namely, one of extreme aggression rather than the unaggressive personality they had before Speech therefore serves as an outlet for an aggressive relationship on an oral level with other human beings and it is the inability of the stutterer to make use of this relationship that is the core of his difficulty

Stutterers are extremely afraid of their own aggressive impulses and as one begins to uncover the unconscious phantasies of the stutterer one finds them filled with highly charged even murderous aggressive impulses One very mild boy as soon as he obtained some relief from his fear of his own aggression showed an insistent and persistent desire to kill all rivals i e people of the same size and to assault brutally heterosexual objects His stuttering represented an unconscious desire to bite and to destroy by sucking The biting movement and the sucking movement were plainly evident when he tried to speak The desire to bite and destroy was inhibited by his great fear and consequently was interfered with and the disordered speech resulted

The psychosexual development of stutterers shows two thing First a great and intense fixation on aggressive oral activities which have been subjected to an extreme repression so that the aggression remains bound with the mouth activity instead of being sublimated and used in other directions Second there is a strong fixation on the anal sadistic stage of development and it is found that stutterers have been children who either were very difficult to train in toilet habits and the training was done very rigorously or the training itself was oversevere Consequently much aggression is retained at this level and these two fixations make the relationship of the stutterer to the other human beings one of extreme danger to the latter

Fenichel[6] states that the fundamental pleasure in stuttering is that of playing with words which analysis has found repeatedly to be a continuation of infantile playing with feces displaced from below upward the words being held back as feces were held back in infancy to produce an autoerotic pleasure The words have in addition the significance of an introjected object the conflict which originally took place between the individual and the object is

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ing no such change in handedness has been made the child on accurate testing still shows the same handedness he always has had Still as in the case of the tics there is something more in the stuttering than the actual psychopathology cited above Often the straightening out of the psychic pathology has little effect on the stutterer This may be of course because the case has not received intensive enough therapy and the difficulties in the past life have not been completely eradicated it may be that there is such a large secondary gain from the stuttering that the individual is extremely loathe to give it up or it may be that there is combined an organic pathology such as Orton indicates

Scripture who has done the most complete work on stuttering and Blanton whose experience also is very large both indicate that there are various methods of treatment First the retraining of the speech mechanism This is what is done in most speech classes in schools and in most stuttering cures The retraining often consists in altering the pitch of the voice When this is done the stutterer can speak in an unnatural tone of voice but without stuttering A second method of treatment would be the study of the handedness and the retraining in the use of the organically dominant side little regard being paid to the speech retraining The third method attacks the problem from the standpoint of psychopathology and consists either partially through psychiatric treatment or completely through analysis in releasing the inhibited aggression and leaving it free for the individual to utilize in his life Probably in the ideal case the three methods of treatment should go hand in hand

(b) *Speech defects* — There are other types of speech defects which have a different etiology and pathology than stuttering and a distinctly different symptom complex First there are traumatic speech disorders I have recently reported a case of a boy of six whose speech showed elision of the initial syllables of words to the point where it was almost impossible to understand him This speech disorder began at the age of two and a half At eighteen months he was learning to speak and was speaking quite normally He fell and cut his tongue very severely and developed so much anxiety about the cut tongue that it was impossible to have it examined until twenty four hours had passed Following this injury he did not speak for a year and then began to speak with the disorder mentioned His personality showed a great inhibition of aggression In the course of treatment his aggression was liberated but its first liberation was in a great flood of aggression of an oral type following which his speech was completely cured This is a traumatic speech neurosis The trauma inhibited the speech because of the fear of pain at the time when most of the boy s aggression was oral in nature Consequently there was no way for him to handle his oral aggression except to inhibit it and the more he inhibited, the more dangerous it became so that he altered his

now expressed by means of a conflict between the ego and the speech apparatus or its speech products

From the stutterers point of view to love is to destroy to hate is to destroy, and consequently he must protect his loved objects from these murderous tendencies of his lest he suffer real or phantasied retaliation from them and the anticipated loss from their death It is, therefore necessary for him to pile up defense after defense against an aggressive relationship with human beings but the more defense there is the more uncontrollable become the aggressive desires and a compromise is reached by stuttering It vents its aggression by annoying and irritating the person to whom he is talking and yet represents himself as a sick unaggressive person

In the history of stutterers one usually finds that the stuttering starts rather suddenly following a fright of some kind, or as in one case in which a child of two and a half years suddenly started stuttering one morning There was no fright on the previous day, but there were a combination of circumstances which aroused terrific aggressiveness In my opinion the fear situation so often found in stutterers histories was either an actual phobia which th child had had sometime before the stuttering started, i e, the amount of fear he showed was not justified by the actual circumstances, or else the circumstances, which produced the fear, were such that they aroused temporarily strong aggressive impulses and at the same time reactivated fears, which were very close to the surface in the child s mind A child shut in a dark cellar as punishment started stuttering The shutting in the dark cellar meant a deprivation of parental love, and this aroused strong hostile impulses The actual shutting in the cellar, however, would reactivate the child s fear that he might lose his parents love so that the hostile impulses would suddenly have to be suppressed

So far the pathology cited has been entirely psychic, but there is no agreement of opinion on this question Orton and those who follow his school of thought believe that the organic mechanism in stuttering results from an inadequacy of establishment of cerebral dominance According to him the stutterer is one who originally was perhaps left handed with a dominant right cerebral hemisphere As a result of training he was forced to give up his left handedness and become right handed i e the left cerebral hemisphere was forced into a dominant position Thus there is not the unilateral dominance found in the average individual so there results not the well controlled innervation to the speech organs but a disorderly controlled innervation and the stuttering follows In many of his cases he shows where the stuttering followed a change in handedness and it is undeniable that in a certain number of cases this etiology seems explanatory However, the handedness of many children is changed without any speech difficulty, and in other cases of stutter

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speech in order not to incur again the painful penalty for the aggressive impulses he had when the traumatic situation occurred

A second type of speech defect is that of babyish speech and lisping This has a similar mechanism to the habits mentioned above, namely that the child either desires to retain the infantile stage of development or wishes to go back to it Frequently children after the birth of a younger sibling will appear to talk baby talk just as they endeavor to drink only milk or start to wet and soil themselves The desire here is not to lose the parents affection of which they feel deprived by the advent of the baby, but to attain that affection by behavior such as the baby shows Such baby speech indicates a present difficulty in psychosexual development and a strongly regressive tendency

A third speech defect is the inability to speak This may be due to many causes There may be actual pathology in the motor speech apparatus but this is not common and many children are operated on for tongue tie when there is no need for this operation There may be a mental defect and every child who cannot speak should have an intelligence examination In this case the lag in ability to speak is coincidental with a similar lag in all other functions A third cause may lie in the fact that the child hears very little language In one case the child did not speak for some time beyond the normal time It was found that the father and mother of this only child were not on speaking terms The father never spoke to the child, the mother had quite a marked depression and was mute most of the time, so that the child had little opportunity to hear speech A fourth cause seems to lie in the babying of the child Parents particularly of an only child or of the youngest child in a large family tend to anticipate his wants so that he does not have to ask for anything Consequently there is no need for him to use his speech apparatus at all He can speak but why speak when you don t have to? More reasonable regime for these children in which some pressure is brought on them to ask for what they want often results in the sudden development of speech I am not satisfied that this is the only cause in these cases, but they have not been investigated fully enough to make any assumption a certainty

IV *Disorders of Social Behavior* — 1 *Chronic Aggressive Reactions* — Children as well as adults frequently get angry, and their behavior at this time will express the anger to the degree permitted by the situation and by the amount of control the child has learned to exercise over himself Regardless of this the behavior itself is an attempt to abolish the situation or person which has angered the child Anger is caused by a situation which is unsatisfactory or unpleasant In the first group come those situations where the child is deprived of some desired pleasure and where his anger is directed at the object which thwarts him In the second group come those situations that tempt the child to do something which is both a desired pleasure and a forbid

den one In this situation the child feels the temptation is dangerous and his anger is directed at the tempter who is inducing him to do something that will have unpleasant consequences and at the prohibitor who will not let him have what he wants Another phase of this is when the situation actually is dangerous and the child attempts to free himself from a feared object by destroying it being angry with it However the first two are the more common and it should be noted that both contain the elements of danger in the first the danger is that the desire ungratified may become too strong to be borne in the second the punishment

Acute anger attacks occurring daily are usually mild and disappear automatically but there are a group of children whose constant daily behavior is that of an angry child even though the emotional expression is not anger

Case 1 A boy of twelve could not remain in school because of his behavior he quarreled with his companions annoyed them broke up their games he annoyed and interrupted the teachers would not stay in his place and in every way was a chronic nuisance So violent was he at times that the other children actually were in fear of their lives In the community his behavior was the same and at home he made the life of his sister so miserable that his mother had to devote practically every moment of her time in keeping him amused Although she did this he quarreled with her also defied and attacked stormed and raged at her He did the same to his father although he controlled himself a little because he was afraid of his father s punishments

Case 2 A girl five of screamed and stamped and kicked on the least provocation hit and bit her mother attacked her father broke dishes ornaments and furniture She attacked and maltreated younger children scratched hit and kicked children of her own age and was a veritable pest at home and in the neighborhood

Case 3 A boy of ten constantly disrupted the classroom routine by calling out refusing to remain in his seat screaming at the teacher attacking the other children and destroying their work On the playground there was similar behavior limited only if the child to be attacked was too large or too strong At home the behavior was not so marked but consisted of striking stamping defiance disobedience and destructiveness

Case 4 A boy of eight was the bane of the family life He was cruel and brutal mentally and physically to his sister to his mother and to his companions who finally refused to have anything to do with him He was always in trouble in school although there his behavior was not as marked as at home

Case 5 A girl of fourteen who lived in an orphanage disrupted the entire routine of her cottage On the least provocation she had a temper tantrum screaming swearing stamping kicking breaking dishes attacking the

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strong always more strongly striving than the others for gratification Gratification cannot be obtained except at the price of extreme parental displeasure When a situation arises therefore that stimulates this particular form of desire there arises immediately the fear of extreme displeasure if it is gratified Consequently the object which stimulates is regarded with anger Some examples will make this more intelligible

A boy from such an unloving home frequently turns to other boys for affection and companionship Perhaps in this relationship he is introduced to overt mutual sex play Thus mutual sex play gratifying his sexual impulses but at the same time filling his need for affection and love will be severely punished by his parents if they discover it and if not he will know from past experiences that they would punish severely if they learned of it Consequently he ceases all companionship with boys and gives up the forbidden pleasure Now if he meets a boy whom he likes or to whom he is attracted that boy becomes a dangerous temptation His very presence will arouse the desire for sex play and the concurrent fear of the parents displeasure So that this particular boy will be regarded as a danger and attacked in an angry manner although the boy may do nothing to give any reason for the attack of anger Such a boy was case 1 During the period of treatment he came to have very marked affectionate feelings for the physician and partly conscious sexual feelings At this point he would attempt always to attack and destroy the physician with great violence even through use of a knife and with every expression of anger and hatred These attacks occurred largely when he had had some very pleasant experiences with the physician which aroused his liking for the latter Earlier in his life there had been several homosexual seductions His actual behavior in the classroom was the same type of reaction The chronic grossly overt aggressive reaction therefore indicates 1 A chronic state of deprivation of instinctual gratification with the aggression directed at the object which produces the deprivation It is interesting that so many of these aggressive children show huge appetites as an attempt to gratify the craving for love orally A chronic fear of temptation the aggression being directed at the object which stimulates the unconscious desire because gratification would be dangerous

As a matter of fact there is usually only type 2 for the chronic state of deprivation necessarily indicates the suppression of many desires which become then serious temptations The chronic aggression reaction is a defense against anxiety the anxiety being the unconscious representation of (1) a strong libidinal impulse and the ideas connected with it and (2) the internal prohibition against that impulse

As has been seen above these libidinal impulses are not in themselves objectionable but only in their direct expression The impulse in the ordinary

other girls and reviling the house mother Interestingly her behavior outside the cottage in which she lived was very good, and she was exemplary in school

Very often such behavior is accompanied by a feeling of anger and a strong desire to destroy and annihilate Owing to the chronicity and energy consumption of their behavior these children do not attain the eminence either in their school work or in their pastimes to which their innate intellectual endowment and skills entitle them They behave chronically as the average child does temporarily when he is deprived of something he wants or when tempted to do something forbidden yet desired Therefore, in understanding the etiology of the chronic state persistent deprivations or temptations must be sought In every one of the cases cited and in many more that have been studied, the outstanding factor in the child s life was the lack of parental affection either because the parents really did not love him or because through the death or desertion of his parents he had never found love or understanding in the homes in which he had been placed Even where, as in case 1 the mother was forced to give the boy all her attention, it was only because she was forced not because she had any real love for him The lack of love also was not the result of the child s behavior but had been present before the behavior became annoying, i e from very early in his life usually from his birth

When the history of these children is unfolded, often it is found that neither parent wanted the child at conception that often attempts were made to produce an abortion that the physical handling of the child was with marked displeasure that the period of breast feeding was reduced to a minimum that the mother could not be bothered to nurse him that toilet training was instituted early and rigorously not for the purpose of training the child, but to relieve the parents of any extra care of him, and that by the time the child could walk he was neglected even as in one case kept in an empty room at the top of the house alone all day in order that he might not disturb his parents Thus, there has not been a temporary deprivation of some desired gratification but a constant and insistent deprivation of all the basic and needful gratifications of early life

The more severe this type of behavior is the more complete and long standing have been the deprivations The deprivations in this type of home, which will have the greatest traumatic influence on the child s development and will call forth the most persistent form of anger, are those directed unnecessarily at physical gratifications, self preservation functions in the first one or two years, sexual in the following years This explains the more complicated situation, when the anger arises in the presence of some temptation usually of a sexual nature Some particular phase of infantile sexuality has been more strictly forbidden than the others or in some way has been more highly sensitized through some seduction outside the house As a result this impulse is

A boy of fourteen rejected from birth by his father and mother to the point that they refused to look after him stole frequently in his foster home Each instance of stealing was associated with the feeling that other boys had so much and he had so little The actual money seemed to mean little to him It was more important that he possessed something and particularly something belonging to someone else Very often as the analytic treatment of a child progresses and the child develops a transference relationship the child desires to steal from the analyst This stealing covers two phantasies the child has positive sexual desires i e he is hungry for love and wishes the tangible evidence of that love in the form of a gift but because of the dangers which he thinks are associated with love and sexual matters he is afraid to express these desires aggressively Therefore he feels that if he steals the object a symbol of love he may escape the price he would have to pay and can punish the loved one for thwarting him by depriving him The following case is of interest in showing stealing as a grossly aggressive desire for love A boy of four was intensely interested in the inside of his mother's body He wished to tear her open and take out all the good things he was sure were there He was a very deprived and rejected child and extremely hungry for her love This hunger aroused these very aggressive phantasies which he dare not put into operation lest he kill her in the process The actual aggression toward her was therefore, suppressed and three years later he is found to be much better behaved than before but persistently stealing from his mother This stealing then simply represents a safer and less dangerous way of acquiring symbolically what he wished earlier

Truancy is a common type of an aggressive reaction It is not a syndrome in itself but only a symptom and this is perhaps the reason that studies in truancy have been so unrevealing Running away is an ancient biological reaction and to say that a child truants from school is saying only that he runs away from it It indicates of course that there is something in the school situation which is unpleasant to this child and is a much healthier form of reaction than is found in the child who finds school unpleasant and truants into day dreaming although remaining physically present The investigation of a case of truancy demands therefore first an examination of the real situation Are the school principal teacher and other children really behaving badly toward this child? Much as we would like to hoodwink ourselves by stating the opposite we must remember that principals and teachers are human beings and as such are subject to human emotional reactions Certain teachers do not like certain children whether because of the child's physical characteristics race color age sex or for some other reason and while cooped up with this child day after day with no way of altering this situation will express this dislike hour by hour and make the child's life miserable No adult

individual is redirected into avenues of expression that are extremely desirable, and the energy expended in the aggression serves as the motive force to accomplish very laudable ends Consequently, a number of forms of therapy are undesirable Punishment for the aggression may stop the form of expression of the aggressive activity although it frequently does not, but the aggression remains unsynthesized and instead of being expressed outwardly becomes turned against the individual to his detriment as will be amplified below Separation from the object of temptation is only palliative and is not practical, unless one desires to isolate the individual from all human contacts forever

The problem must be attacked in the light of its etiology and pathology First there is need particularly in young children during the formative periods of their reaction pattern to remove the deprivation, i e, to give them more parental love and affection This is difficult and usually cannot be accomplished by ordering such by prescription As this whole question has been discussed in the general section of therapy for parents, it will not need repetition here If such a result cannot be obtained it is desirable to remove the child to a more favorable situation

In the many chronically aggressive younger children and all older children of this type therapy to the parents either directly or through placement is only temporization useful as an adjuvant to treatment of the child but not curative Curative therapy is psychoanalysis Its purpose in these cases is to liberate and make conscious the repressed and feared libidinal desires to remove the too extensive nature of the prohibitions and so allow the individual to find desirable avenues of expression for them, in which expression the aggression becomes reunited with the libidinal desire and forms its driving force

As stated above, the chronic aggressive reaction may be modified by force of circumstances so that it appears not as constant chronic anger but in disguise or in forms over which the individual feels he has no control One marked displacement of chronic aggression is in certain forms of stealing The child does not behave as if chronically angry or aggrieved, does not attack or defy, although a brief period of such behavior usually appears in the history of the case but behaves in an agreeable manner with a marked need to steal

A boy of ten was a great thief On one occasion he stole $50 from his financially shortened parents and ran away The theft was caused by the fact that his older sister had been given a cheap watch an article he craved, as a present He was chronically starved for affection and in addition had a strong rather brutal father Overt expression of his aggression was denied him so he gratified his desire for affection by taking money, a symbol of love from his mother and at the same time his anger at his rejection by depriving her as she deprived him

been a violent protest against the familial rejection Such violent protests seem very unnatural but occur in adults as well as children It is not uncommon to find an adult seemingly willing to squander his money his personal comfort and success in retaliation against a real or fancied slight often of an insignificant nature Of course such people are sensitized to slights and similarly rejected children become extremely spiteful in their behavior often to their own detriment

In my experience truancy is more common among children of low intelligence and from poor social backgrounds So that here the problem is not entirely a psychiatric one but is at least partly sociological

There is another type of aggressive reaction of a more extreme form which seems to have the same psychopathology but whose prognosis is very poor A girl of eighteen had the following history At the age of fourteen it was necessary to place her because of the break up of the home Her life before that age cannot be ascertained accurately but it would seem from what can be learned that the reaction patterns were the same although perhaps not so extreme as they became after puberty At first she liked the placement and got along very well but after a week or so she began to quarrel with the foster mother whom up to this point she had liked She accused the foster mother of tyrannizing over her of cheating her of hating her of gossipping about her At first these accusations were silent but soon she became quite verbal She reacted to her ideas withdrew from all contact with the foster mother or if she met her berated her for her behavior and complained of the way in which she was being misused The foster mother tried very hard to adapt herself to the girl s vagaries but nothing she could do was satisfactory After about a month the girl demanded removal to another home This was done and again the same cycle occurred Again and again this was repeated Neither the type of home or the foster parents made any difference as all types of homes and foster parents were tried Even when she was allowed to pick her own home there was no difference Always after a brief interval of good behavior while she became acquainted extreme difficulties developed When he was eighteen she became suddenly worse developed fears of people whom she met on the street had delusions and auditory hallucinations of a persecuting nature and became a full blown paranoid schizophrenic It is well known that the paranoid reaction is an attempt to solve a strong homosexual drive and it was so in this case Although I have been unable to find many case of paranoid schizophrenia whose early history is such as this girl s was I have seen several children with exactly the same reaction who later became paranoid Therefore I regard the extreme form of the chronic aggressive reaction in children as very significant believing that it is an attempt to solve a serious homosexual conflict that the prognosis is poor and that such cases will either become

would be expected to put up with this situation, yet the child's complaints go unheeded and he is forced to adjust the situation by truancy.

Similarly as adults we are not expected to mix daily with people who hate us unless we feel inclined to do so but a child may be frowned upon by all his companions in school because of some attribute beyond his control, color, race appearance, vocation, religion or social status of his parents and is expected to adjust to it. He does not do so but instead truants as is to be expected. We designate such a child as a truant and punish him, yet in neither instance does the fault lie with him or with his personality adjustment. It lies instead in the situation and though theoretically it may be possible to get a human being to adjust happily to any situation, yet practically this is impossible and undesirable.

Level of intelligence has much to do with truancy. A child, whose intelligence level is lower than the average, although not of a feeble minded degree, will find more difficulty in extracting pleasure from his work, because his results do not seem commensurate with the high degree of application required from him. There results a mild chronic feeling of failure and disinterest which is perhaps best assuaged by turning to more interesting and more pleasurable pursuits and away from school. To such a child the busy streets, where he can study construction of buildings, etc., pursuits which to him are full of interest, have an unresistible appeal. If he has a little money, he may turn to the movies as a source of pleasure rather than the chronic unpleasurableness of school.

However, the cause of the truancy may not lie in the school but in the home. Perhaps events are occurring in the home against which the child is rebelling, favoritism of another child who perhaps does a little better in school, the advent of a new child in the family, etc., and as an expression of his resentment against his ill treatment the child will truant.

A boy of nine was the neighborhood problem. He stole, ran away from home, was destructive of property, insolent to his parents, a constant rebel when in school and a frequent truant. This very aggressive behavior started two weeks after the birth of his younger brother and continued throughout the first two years of the latter's life during which time the baby was without doubt the favorite.

A boy of eight showed much the same behavior, but his school difficulties were greater than his neighborhood ones. When in school he was absolutely unteachable and his truancies were many. He was a greatly rejected child in a home where the main emphasis was placed on school success, one sister was an attendance officer, another a teacher.

In both of these cases the truancy was not the only problem. There was also much other misbehavior, and the basis of the misbehavior seems to have

imitate no adequate superego formation no ban on the aggression The individual therefore becomes asocial *

In other cases there comes a sudden and forcible erection of an intolerant superego and the individual becomes neurotic or perhaps psychotic The neurosis may show itself as an illness or may affect the individual s character and these neurotic characters have endless difficulties in their relationships and are extremely refractory to treatment There are no definite data indicating why one person remains chronically aggressive another becomes a delinquent a third a neurotic and the fourth shows character defects but we do know some of the reasons why the third and fourth results occur

Direct expression of aggression is dangerous both to the child and to his relatives therefore, extreme pressure is frequently placed against the aggressive reaction regardless of the cause Such an attempt may not be successful but if it is or if coincident with the child s attempt to control the aggressive reaction coincidental catastrophes happen to the people against whom the aggression is directed then the aggression instead of being turned outward where at least it is not dangerous to the child is turned inward with disastrous results

One such boy was very aggressive toward both his parents and particularly to his elder sister who stood in the mother s place Suddenly the older sister died, and almost over night the boy changed from an over active over aggressive youngster to a frightened child unable to do anything He could hardly be induced to put a mark on paper with a pencil took no part in any activities of the other boys or in school work would not enter into conversation and simply sat doing nothing talking of fears of animals and laughing to himself

* This is not the only cause of asocial behavior Knowledge of delinquency like that of the chronic aggressive reactions is in a chaotic state The following is a tentative classification of juvenile delinquency

(1) Occasional delinquency a hungry child will steal food or candy or money to buy the same If a child has been accustomed to a certain financial situation and this is changed suddenly for the worse he may steal luxuries toys or money to buy them in order to make up to himself for his changed status
(2) Delinquency due to feeble mindedness
(3) Neurotic delinquency e g the case of compulsive stealing cited above
(4) Delinquency as a symptom of a psychosis
(5) Delinquency due to a normally formed but asocial superego Morals differ throughout the world Ritual murder is laudable in New Guinea but not in America In New Guinea therefore both social custom and the superego tolerate an act which is banned in other places A child brought up in an environment where a particular act e g stealing is laudable will develop a superego which will not condemn theft regardless of what may be the custom elsewhere In such a case the child is normal his superego is normal for his upbringing but if he changes his environment his behavior may be regarded as asocial
(6) Delinquency due to lack of love the type mentioned in the text.

definite paranoid schizophrenics or will go through life with very marked paranoid personality reactions

In the case just cited the etiological factors seem to have been first a real rejection with real ill treatment by the mother This would turn the child from the mother to the father and heighten the heterosexual strivings but would hamper such strivings because an identification with the mother was impossible Second there developed a real rejection by the father in favor of the younger brothers This would inhibit again the heterosexual strivings, increase the homosexual ones love for the mother, further interfere with the identification with the mother and cause an attempted identification with the father, which would be unsuccessful because of his rejection Third, there occurred repeated homosexual seductions by older girls These occurred at the time when the libido direction was not certain because of the earlier factors and caused a homosexual fixation At the same time there had been developed strong reactions against any homo sexuality because of the mother s attitude, so that the homosexual striving was regarded as dangerous and projected

I have a strong suspicion based on considerable data that such a history lies behind all the extreme chronic aggressive reactions, so that as soon as a child seems to be developing such a reaction search should be made into the parental attitudes and into the possibility of recent homosexual seductions

The whole subject of chronic aggressive reactions and their outcome in the future life of the individual is extremely important Unfortunately, the group of chronic aggressive reactions serves only as dumping ground for many dissimilar conditions and personality structures whose sole similarity is their aggressive behavior Certain facts are known Aggressive activity is the normal reaction to a deprivation of love e g, every child shows it with the birth of the next child Direct aggressive reactions are not tolerated socially and, therefore, come under the ban of social and parental disapproval This ban normally soon becomes incorporated in the individual s superego and serves as a limitation on the direct expression of his aggression, but permits him to express it in socially acceptable ways In the chronic, aggressive reactions, therefore we must consider what causes the over severity and chronicity of the reaction and what is its eventual outcome, i e, what effect has it on the personality structure Aggression being the normal reaction to a love deprivation then a chronic aggressive reaction will result from a chronic and severe love deprivation and this is so This indicates an important practical point if a child has an adequate amount of love he will not show chronic, aggressive behavior If love is totally lacking either from severe parental rejection or from the absence of parents, as occurred with the wild children of Russia orphaned by revolution war and famine then there is no parent to love and

less internal need for help if the world is out of step why should he alter his step let other people do it Al o during treatment there is a constant attempt to live out his aggression rather than analyze it

2 *Inhibition of Activity* —(*a*) *Restriction of Social Life* —Restriction of activity is a universal mode of defense in a dangerous situation and, therefore, forms a common clinical syndrome in childhood The restriction may involve almost the entire social and physical activity of the child or only affect some particular portion of his daily routine When the social life is restricted the child withdraws from contact with all or with certain groups of his companions He plays with them no longer although he may greet them in passing occasionally talk to them and perhaps stand on the sidelines watching their games No urging will induce him to enter the games or be really friendly and if urged to do so by the children themselves he returns into the house ostensibly to engage in some sedentary activity reading drawing looking at pictures etc If his parents older siblings or friendly adults urge his participation he makes excuses which have a certain validity but are obviously ineffective as an explanation If the urging continues he becomes irritable and angry

One boy of twelve refused even to go outside the door if any of the neighborhood children were playing and while in the house complained that he had nothing to do Another boy of twelve had not associated at all with the children in his neighborhood He would speak to them in a friendly manner and would stand and watch their games but would not even walk to school with them Another boy would have long periods in which he would not speak to any of the neighbors at all At times he would sit on the porch but if he saw any children come out to play he would go into the house immediately A boy of fourteen could not be induced to enter any of the athletic events by which the school set great store He resisted all persuasion by the other boys and was rude defiant and disagreeable either to the masters or to his parents if they attempted to force him He came and went from school alone and at recreation periods would be found sitting sullenly in a corner of the field

When the school is involved the restriction takes the form of truancy but not truancy of the usual type In this type the child does not attend school but simply stays at home and occupies himself sedentarily Seldom during school hours or even at other times will he go out of the house Neither the persuasions or the threats of his parents teachers or school authorities make any difference The child states that he would like to attend school just as much as they desire he would but that he can t When force is threatened he is liable to be found hiding under the most inaccessible bed Such cases are found at all periods of school life and although more common in the early years may be found also in the final years of high school or even in university

If he addressed anyone, it was in the form of a question — "Do you know what happened?" Perhaps after considerable urging which would always be answered in the form of questions it would be possible to piece together the story he was trying to tell Such stories, of which he had a small stock, were practically the only form of conversation in which he indulged Any situation which usually could arouse aggression, would be reacted to by his hurting himself or by phantasies in which he was injured

This case is typical of what happens when a strong aggressive reaction suddenly is stopped either because external force was used or because of events which were regarded as a punishment The aggression's outward expression is inhibited but the aggression still exists in its unneutralized form, the basic situation which has operated to stir it up being unmodified, and has to have an outlet As this outlet cannot be toward the world, it must occur within the psyche i e the aggression acts against part of the personality and subjects it to the same harm as if it were outwardly directed This is the reason for the self inflicted hurt and the phantasies of being hurt in the case just mentioned Also the aggression is withdrawn not only from undesirable outlets, but from those outlets which are very necessary for active social life

One or two practical points are of interest in this connection The improvement (?) in aggressive reactions following the application of major force is not an improvement The limitation of the aggressive reaction without the basic psychopathology being altered is at the expense of the individual's psychic development and results in a distinct crippling of the psychical apparatus In the training of a child it is more desirable to understand the etiology of an over-expression of aggression and alter these etiological facts rather than at once apply restrictive measures with their possible harmful results Why medical men in general attempt to treat such cases by the application of force, is difficult to understand Any doctor who attempted to stop forcibly the appearance of fever without bothering himself as to the etiology would be a menace to his profession Yet that is often what the well trained medical man does in the treatment of the chronic aggressive reactions

In the treatment of the chronic aggressive reactions one must consider how much of the reaction is due to loss of love and how much is due to an over severe superego If the former is greater this lack must be made up If this is not possible in the home placement is advisable If the latter is greater, intensive psychiatric therapy preferably analysis is necessary Practically, for the chronically aggressive child of seven years or older I would suggest removal from his home to controlled environment where he will receive adequate affection and intensive psychiatric therapy

Treatment of preparanoid conditions is difficult The projection mechanism and the carrying of the aggressive reactions into the world make the child feel

In case 2 the mother forbade the boy to play with other rougher children in the neighborhood on pain of losing her love The boy extended this prohibition to include all the children lest he be caught unawares in some temptation which would remove his mother's affection Withdrawal from school often occurs for the same reason A boy of five was associated with a slightly older cousin in many annoying activities breaking windows destroying flower beds ringing doorbells and in sex play Many attempts on the part of the parents to combat this behavior were unsuccessful and a forcible separation was effected by removal from the neighborhood Just before the removal his uncle and grandmother both of whom he was very fond of, died He regarded the separation from his friends as a punishment and thought that his behavior had caused the death of his beloved relatives Therefore, he feared that if he became friendly with other boys they might lead him into behavior which would cause him to be deprived of other people whom he loved his parents and his aunt He feared also that if he left home either his parents or his aunt might die in his absence So he ceased to go out of the house and was panic stricken when forced to stay in school away from home

Intellectual pseudo-retardation either general or along specific lines arises in a similar way The child being curious and wanting to hear see and learn everything soon finds that certain forms of knowledge particularly pertaining to sexual matters are not permissible If he persists in this type of curiosity often he is threatened with severe penalties beatings dislike bodily injury ("if you dare to peep at little girls on the toilet you will go blind ") The threat is really directed against only one form of curiosity but the child often displaces it on to all learning or on to certain specific branches of learning Reading is often to learn through seeing and in order to preserve his life and physical integrity he eschews the forbidden pursuit and the activities connected with it The psychodynamics of these limitations of activity briefly are the limited activity symbolizes a forbidden one which has been prohibited by severe threats The child is afraid that the threat will come true if he pursues the symbolic activity and in order to protect himself ceases from its performance As the connection between the symbolic and the forbidden activities is an unconscious one he cannot tell why he refrains only knowing that he fears some dire catastrophe to himself and to the people whom he loves if he persists in it *

Treatment depends on ascertaining the connection between the symbolized

* Not all cases of reading or arithmetic disabilities have this basis They may be due to faulty teaching in the early years or to organic factors auditory or visual defects or disturbances in cerebral dominance due to change of handedness. It is well in such cases to study the emotional factors however

(*b*) *Restriction of Intellectual Life, General and Specific* —The child does not need to limit his school life by absence Perhaps oftener he will attend school but will learn nothing It is surprising how many years such a child can be faithful in his attendance yet learn absolutely nothing A boy of eight attending a very good school had been the worry of his teachers for four years because in spite of his average I Q (100) he had learned nothing He was less able at eight to read or write than a child completing the first month of school In everything but school work he appeared a normal boy of his age This total limitation of educational activity is not as common as are limitations of specific technical procedures i e, the child seems unable to learn to read or to do arithmetic A boy of nine did very poorly in arithmetic, although he made average progress in other branches His arithmetical achievement was uneven sometimes he did well sometimes failed totally On close examination his difficulty was found to be in his inability to use "3" If he was given a sum in which 3 did not occur he obtained a correct answer, but if a "3" were present the answer would be wrong

These limitations of activity are very puzzling to parents teachers and physicians especially if they occur suddenly Two trends are evident in the symptomatology There is a definite restriction of one or more of the child's activities, apparently without any valid reason If an attempt is made to force the child to do the inhibited activity he becomes panic stricken or very angry

A limitation of activity indicates that to the person the particular act or series of acts is not to be done i e it is forbidden or dangerous although to everyone else it may seem desirable and even laudable This concept is substantiated by the second reaction If forced to do the particular thing the child has panic as if the act were dangerous or there is an angry reaction as if the act were forbidden and he was being tempted

Case 1 is a good illustration of this and was observed during its formation This boy retired from all social contacts with other boys For several years he had associated with rather a tough group of boys who initiated him into stealing smoking and sex play His parents learning of the smoking and stealing forbade this association but he persisted in it One night the mother, catching him smoking, placed a curse on him If he smoked again, she hoped he would die He knew that smoking was not particularly bad or dangerous, but he knew that sex play was Therefore he displaced the curse from the smoking to the sex play and in order to avoid the temptation to the latter, which would result in his death he separated himself from his companions who were stimulating him sexually As a further and more complete measure of safety he separated himself from all boys and remained under the parental eye whose protection from death he desired Parents often by such chance remarks impose extensive limitations on their children's lives

boy does this because he still has loathing and fear of the female genitals the girl as an attempt to deny her strongly aggressive desires and extreme interest and envy of the penis With the advent of puberty there comes first very self-conscious and embarrassed interest in the opposite sex then a definite attempt to attract the opposite sex and then adolescent love making Thus during the latency period the main sexual outlet of the child is a homosexual one hence the frequency of boys and girls gangs in which sexual matters and actual sex play or its derivatives such as contests in urination etc are carried on actively The finding of either a boy or girl in the latency period engaged in overt sexual activity does not mean that the child has a problem but simply that he has been caught whereas the other 99 out of the 100 have not The child under five or six is strongly attracted to the opposite sex actually making love flirting and phantasying marriage the foundation of a home and having children

Overt homosexuality after puberty is another question A boy of thirteen was referred because of his school behavior He did not learn very well and spent a great deal of his time in annoying and mischievous behavior This annoying behavior was particularly directed toward the older boys in the class and on the playground In the psychiatric interview he occupied much of his time with very childish interests but each activity and interest had the purpose of annoying the psychiatrist At home he behaved like a girl his main interests being in clothes and his appearance He delighted to dress up in girls clothes and to wear jewelry and would spend hours with his mothers rouge and lipstick before the mirror making himself up and admiring himself His voice was very affected and distinctly girlish Although he had not had homosexual relations his attitude to men and older boys was that of the coquettish girl who longs for and at the same time fears a sexual assault

Homosexuality has several causes Certain cases are constitutional Others are due to endocrine dysfunction the homosexuality being associated with other symptoms of endocrine disturbance (Physical conformation alone in children should not be regarded too seriously as a sign of constitutional or endocrinological homosexuality) In many cases homosexuality is the result of interference with the ordinary course of psychosexual development by which the homosexual component in the bisexual structure of every human being becomes dominant at the expense of the heterosexual This interference may be due to a rejection by the normal heterosexual object the parent of the opposite sex and excessive physical and psychic stimulation by the normal homosexual object the parent of the same sex or to a series of marked homosexual seductions by older children or adults or its equivalent the exclusion of all contact with persons of the opposite sex as occurs in reformatories prisons and institutions The case cited above is a good example of the former The boy was adopted at the

and forbidden activity and subjecting the idea that the symbolized activity will result in punishment to the clear light of reality This procedure, however is not as simple as it sounds, because these connections are often unconscious and necessitate a complete investigation of the child s unconscious mind Suggestion persuasion change of environment are of little avail Usually very intensive therapy of a psychoanalytic nature is required Even with this form of treatment the results often are not satisfactory, for the limitations of activity are more tolerable than the effort and emotional upsets incident to an analysis With certain of these cases it would perhaps be as well to defer analysis until later when there are greater chances of success

5 *Sexual Behavior in Children* —All of the perverse sexual acts of adults are found as normal infantile activities The infant obtains great pleasure from his sucking activities the perverse adult from fellatio The little child gets great pleasure from stimulation of the anal mucus membrane, the perverse adult from anal intercourse The child gets great physical pleasure and excitement from peeping and exhibiting his body the perverse adult from voyeurism and exhibitionism In the course of development we expect the child to relinquish these infantile pleasure acts as the main part of his sexual life and to relegate them to the minor role of fore pleasure This expectation is not accomplished at once but occurs slowly through the years of development, so it must not be forgotten that all children will show these desires for varying periods It must also be remembered that these desires as major impulses are relinquished only when the child is capable of passing on to the next stage of his development and that their relinquishment and the formation of the defense modesty good breeding culture come about as a development process and are really not dependent on training These are necessary impulses, they need guidance but they cause trouble *only* if controlled too rigidly and too early It is much better to allow a child to remain immodest until he develops his own modesty as he will than to suppress his immodesty rigidly and render him overly modest, self conscious and uncomfortable It is better to permit the child to peep than to punish him for it and make him fearful in his intellectual curiosity If parents and teachers had a better knowledge of the purpose and course of these impulses they would be less concerned by a chance knowledge that their child was engaging in some form of sex play and would not plunge madly into punitive acts which may damage permanently the child s psychosexual development

Overt homosexuality is not problem behavior, if it occurs before puberty, because it forms a normal period of psychosexual development During the latency period i e the period between five or six and puberty, the child often temporarily turns away completely or almost completely from interest and attraction in the opposite sex treating them with disdain and rejection The

(*b*) *Schizophrenia* — Schizophrenia in childhood i e under puberty resembles the adult catatonic type The child becomes seclusive loses interest in his usual activities withdraws from group plays sits and mopes by himself One boy of seven withdrew into a corner and spent his entire day cowering there consumed by the fearful delusion that an eagle was coming through the floor to tear out his organs Bizarre catatonic behavior sudden rage attacks on themselves and others purposeless destructiveness posturings and mannerisms are the most striking symptoms Hallucinations usually auditory occur but these are not typical for most children at some time or another have hallucinations or more accurately illusions so marked as to be indistinguishable from hallucinations

The schizophrenic child can only be treated in a hospital and if analysis is possible it should be used as it alone offers any hope of cure However the same difficulty arises but to a more marked degree as occurs with attempts to analyze adult schizophrenics contact is hard to secure and little real transference develops The prognosis usually is poor

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age of two months because the adopting father wished to have a child while the adopting mother wanted neither her own child or an adopted one The mother devoted as little time to the child as possible while the father doted on him, carried on all the physical care and unquestionably himself obtained much pleasure from prolonging physical manipulations From the age of three years the father slept with the boy supervised everything he did restricted his contacts with other children and even the occasional contact desired by the mother As a result the boy soon developed strong sexual feelings to the father and feelings of jealousy and rivalry to the mother, and these feelings were fostered further by the father By the age of thirteen he was dominated completely by his homosexual impulses and had suppressed all the heterosexual ones

Treatment for fully developed homosexuality is almost impossible The individual is too content with the homosexuality, and the heterosexuality is too submerged to leave any more reason for changing the direction of the sexual impulses than there is in the average person to change from heterosexuality to homosexuality This type of deviation of course, is preventable

For normal development the child needs the loving presence of two parents in his life at home and at school and he should be exposed to members of both sexes equally Institutions whether for boys or girls should have house fathers and house mothers in equal proportions and it would perhaps be desirable to abolish the segregation of the sexes now so commonly practiced in boarding and day schools and orphanages

V *Psychoses in Children* — Frank psychoses of the adult type are not frequent in childhood Schizophrenia and reactive depressions are the most common I have never seen a case of manic depressive insanity under puberty Severe reactive depressions of the adult type are rare also

(a) *Reactive Depressions* — When a child has suffered a severe deprivation, loss of love objects by death or desertion, or by removal from his home, he reacts by listlessness, apathy dejection and agitation as does the adult but from superficial observation does not seem as deeply concerned ideationally as the latter More penetrating observation discloses that the organic and motor disturbances, gastrointestinal and urinary dysfunction restlessness alterations in behavior etc are the physical signs of extreme mental suffering the child frequently hides from others and that the actual mental suffering is in severity as great as, if not greater than that of the adult The hiding of the suffering is extremely undesirable and every child who undergoes a serious deprivation in his love life, should be given and encouraged to use every opportunity to discuss the event and his reactions to it in detail with adults whom he loves This discussion will tend to relieve suffering and prevent reaching false conclusions as to the cause, purpose and meaning of these major life catastrophes

CHAPTER III

POST-ENCEPHALITIC AND POST-TRAUMATIC BEHAVIOR DISORDERS

By EARL D BOND

TABLE OF CONTENTS

As this chapter is concerned only with the behavior disorders which follow encephalitis or trauma in children the characteristic behavior patterns will be described first Encephalitis itself is discussed elsewhere (see Vol VI Chapt III)

BEHAVIOR

Histories in typical cases show that obedient well behaved children after a definite or vague illness or fall rather suddenly become disorderly disobedient irritable cruel There is restlessness and aggressiveness with lack of the ability to learn from punishment The children throw overboard ordinary fears and caution they take on new and unusual fears or obsessions Their moods are unstable They are mawkishly over affectionate and demand attention the lay opinion is that they are spoiled Continuing the disturbed sleep rhythm of the acute attack they often fall asleep by day and prowl at night They cannot get on with other children Temper tantrums come often Intelligence usually is not impaired

The result is that at home these children do exactly the things that most disturb their parents In fact post encephalitic behavior can almost be summed up by saying that it is that kind of conduct which is most infuriating to adults Homes go to pieces under it

The result at school and in the community is truancy petty stealing dangerous attacks on other children The children come to the notice of truant officers the police and the courts and are embarked on a career of crime

unnoticed The family may never know or soon forget that the child has been sick and punish him in the hit or miss fashion which characterizes so much parental discipline Or the onset may be terrifying Parents are apt to be too strict or too lenient The everlasting restlessness prying curiosity, unreasonableness of the child soon bring forth all sorts of violent emotional reactions in the family which react badly on the child and which he uses for his own ends It is not reasonable to expect any mother to give to one child the unremitting care which is necessary and maintain an even emotional balance Some go so far as to insist that the cerebral damage has no direct effect upon the behavior which comes from a wounded ego It is worth noting that in a case of undoubted cerebral damage in a girl the blow on the head which she received from an iron toy was caused by her irritating behavior toward the boy who hit her

Treatment

There are no records of improvement of behavior at home Foster homes show a few successful results[18] but the best authorities on foster homes do not recommend their being tried The bright post encephalitic children do not fit in to schools for the feebleminded and still less into hospitals for adult mental patients Disciplinary schools are useless except for protecting the home against the child

The writer is convinced from the study of 85 post-encephalitic and traumatic children in the Franklin School of the Pennsylvania Hospital that what is necessary in treatment is a boarding school set up under psychiatric control In such a school individualization is necessary but also the chance for a child to measure himself with a group The children must be re socialized

Ten years experience[20] seems to indicate that the school must have these characteristics (A) Unified administration — one head an experienced teacher with one assistant to every three children (B) Medical studies and care (pediatric) separate from psychiatric treatment (C) Psychiatric interviews as indicated for each child often two or three hours a week set in advance (D) A daily routine and environment which is tolerant and individualized but which imposes necessary restrictions For instance temper tantrums lead to immediate separation from other children but it is clear that the adults in charge are not emotionally disturbed by the situation The restrictions they are under prepare them for the necessary restrictions of society if they resent them or misinterpret them the children are encouraged to discuss and work out their feeling in the treatment interviews with psychiatrists who have not been in the environment which caused the restrictions (E) Frequent staff conferences to keep a unified plan before everybody

They are chronic runaways and are helped by motorists who see bright and appealing children with hard luck stories which are convincing

Two cases illustrate this behavior Roger was an obedient, good natured and cheerful child to the age of four, when encephalitis appeared with the symptoms of strabismus and disturbed sleep rhythm Afterwards he was sulky suspicious tormented children, stole money and became a chronic runaway His intelligence at ten was indicated by an I Q of 120

Jack to the age of nine was a ' good boy , not in any way standing out from his eight brothers and sisters From that age on he was restless a caged wolf at home a truant at school, later a hobo and by 21 an habitual criminal His father describing his parole after six months in a county jail his immediate theft of hats which he gave away, said as he was leaving 'I don t suppose that his encephalitis at the age of nine had anything to do with his conduct His eight brothers and sisters, with no encephalitis, had kept on the even tenor of their ways

Pathology and Etiology

The neuropathology of epidemic (lethargic) encephalitis consists partly of inflammatory foci scattered through the mid brain Such pathology can easily be imitated by other infective agents and by the minute brain hemorrhages after certain traumata Brain damage from any or all of these three causes apparently initiates characteristic behavior Follow up work on many cases for five to ten year periods indicates that often the lesions are not progressive

In 161 cases of behavior disturbance of post encephalitic or post traumatic kind the onset of lethargic encephalitis was described in only 79 In 38 cases the causes were measles scarlet fever, pertussis, influenza, pneumonia, vaccination and other common childhood infections In 16 cases there were head traumata, chiefly by falls or automobile accidents[11, 14] In 13 cases there were combinations of cerebral infection and trauma In the remaining 15 cases there were complicated situations, including lead poisoning and severe burns

Many mild infections may sweep over a part of the brain and escape notice[1] How often minute hemorrhages may come from childbirth and traumata is interestingly discussed by Patten and Alpers Martland Schroeder Crothers and Rosett[12, 13, 14, 1, 20, 23] Interesting explanations of the behavior disorder in terms of neuropathology center either about damage to certain brain areas or about toxic or focal interruptions of pathways Motor excitation without exhilaration may be produced it is suggested by irritation of the optic thalamus or by interruption of inhibitory fibres to the basal nuclei

Mismanagement of the convalescence is certainly a factor in the behavior disorder The onset of the acute symptoms can be insidious vague may pass

It is remarkable that only 3 children out of the total of 85 have shown signs of any advancing neurological lesions

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Such a school has many meanings to the child He finds himself transferred from parents who were made extremely emotional by his behavior who were willing to sacrifice anything to keep him quiet, whose attitude toward him was continually changing, to teachers who never vary, who are not disturbed who deal with emergencies in accordance with a long distance plan tolerantly and firmly Then he finds himself listened to at stated times by an interested but not critical person Also he is no more an isolated person, but he shares his problems with others He develops independence because tasks are assigned to him and left on his shoulders

Results and Prognosis

As has been stated little that is favorable is known about the results of treatment in patients homes in foster homes, or in ordinary hospitals For this reason the results of treatment at the Franklin School over a period of ten years are given[70]

From 85 children admitted a tendency to improved behavior was seen in 80 the improvement ranging from a moderately increased ability to get on with other children to a complete social adjustment This statement applies only to progress in the School

Of 76 discharged cases 20 have made good adjustments at home The following cases are illustrative R C a clean and obedient boy had encephalitis at five after which he became restless, reckless aggressive could not get on with other children For nearly six months at the School he did well Then returned to his home where he is "no more trouble than his five brothers and sisters Of three boys followed for over five years at home one has become a successful technician and chairman of his church committee and two others have graduated from high school with fine, all around standing

A second group of 3 children has done poorly at home including many children who changed remarkably for the better in the Franklin School and then went to pieces under bad home and neighborhood conditions The following cases are illustrative A M returned to gloomy and dissatisfied parents His mother was too lenient and his father too strict He has stolen money at home but he gets on well in school and in the neighborhood Sadie after great improvement in the School continued well at home for three weeks in spite of a mother who described the management of her children as one of whipping and hollering The family was evicted for non payment of rent Sadie has relapsed to her former bad behavior at home although she gets on well at school

And 33 of the children after fair to bad conduct at home were finally taken to State institutions of one sort or another

CHAPTER IV

MENTAL DEFICIENCY

By E. ARTHUR WHITNEY

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The term mental deficiency includes any state of incomplete mental growth which renders the individual incapable of successful adaptation to life in normal society

History

In early times when the survival of the fittest was the watchword of life the mental defectives were objects of derision aversion or persecution The laws of Lycurgus were applied not only in Sparta but rather universally to a lesser degree by all peoples The Bishop of Myra (St Nicholas) about 300 A D was one of the first to improve definitely the lot of these unfortunates Later during the reign of Edward II the following was enacted the King shall have the custody of natural fools Perchance later during the Middle Ages the mental defective suffered less from persecution but little or nothing was done to improve his lot

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June 1 1936

Moron	Low	Light work — makes beds	8 years
		Heavier work — scrubs — mends etc	9 "
	Middle	Good institutional helper	10 "
		Fairly complicated work — occasional over sight	11 "
	High	Use machinery — cares for animals — can not plan	12 "

Treadgold of England divides all types into primary and secondary aments He estimates that eighty per cent are of the primary type and only twenty per cent may be classed as secondary Larson of Denmark classifies the defective as endogenous or exogenous L O Lewis[7] of England has a twofold classification dividing the mental defective into subcultural and pathological amentia

Binet[8] in 1905 published in L Annee Psychologique the first efforts at classification by means of intelligence testing Goddard Fernald[9] Kuhlman[10] Terman Yerkes Hardwick and others from time to time have extended revised and modified the Binet Simon[11] scale

This scale grades intelligence only in terms of mental age implying a varying degree of superiority or inferiority depending upon the chronological age The ratio of the actual age to the mental age is termed the I Q or intelligence quotient This scale of measurement provides an instrument for determining those mentally defective in the general population However the test of time has shown that it is not an infallible scale and is subject to definite limitations

Fernald included intelligence tests as only one factor in his famous ten fields of inquiry essential to the study and diagnosis of feeble mindedness They are physical examination family history personal and developmental history school progress examination in school work practical knowledge and general information social history and reactions economic efficiency moral reactions mental examinations This tenfold inquiry is considered as standard in all clinical work

Potter and Brown s[1] grouping into four main divisions seems basically sound 1 mental diagnosis physical diagnosis 3 type of defect 4 probable cause

1 Mental diagnosis designates the intelligence levels as idiot imbecile *moron borderline and not mentally deficient using the (I Q) intelligence* quotient as the basis for the diagnosis I Q s below twenty annotes an idiot twenty to fifty i regarded as the imbecile level fifty to seventy is a moronic level seventy to eighty the borderline and above eighty suggests that the individual is not mentally deficient Other factors considered in the mental

Modern thought and care of the mental defective dates from 1798 when Itard[1] of France attempted to train the so called 'savage of Aveyron' Although Itard's attempt was a practical failure, it did pave the way for Seguin Voisin, Ferrus Falret and others

Other countries were soon to follow France in a sympathetic and scientific understanding of the defective In Germany Guggenmoos and Haldenwang in 1828 and 1835 respectively were pioneers in behalf of the mental defective, Guggenbuhl of Switzerland Hubertz of Denmark, Glasell of Sweden, Van Koetsvelt of Holland and in Italy Gonnelli Cioni founded schools for these unfortunates England and America soon followed the trend of thought and action of the European Continent in attempts to ameliorate the condition of the mental defective Dr Wm Twining (1843), the Misses White (1846) and the Rev Andrew Reed (1846) were England's pioneers in this field, while to Dr Samuel Howe (1848) of Boston is due the credit for the first American efforts in behalf of these unfortunates

From these beginnings there has evolved a universal recognition of the major problems of mental deficiency The results show not only government maintained institutions in practically every state of the Union but in nearly every civilized country of the world as well Beginning with 1890 there has also been developed in many large cities and some towns a system of public school education which provides special classes for retarded children

Classification

Mental deficiency or the mental deficiencies as they might more properly be termed have been classified in a variety of ways beginning with Seguin's first scientific classification of 1846 Barr[3], Goddard[4], Terman, Treadgold[5] and others have outlined classifications all of which are practical and efficient The American Association on Mental Deficiency has adopted the following classification based on the Binet scale of measurement of intelligence

Class	Grade	Capabilities	Mental Age
Idiot	Low	Helpless	under 1 year
	Middle	Feeds self — eats anything	2 "
	High	Eats discriminately	3 "
Imbecile	Low	Tries to help	4 "
	Middle	Only simple tasks	5 "
	High	Tasks of short duration	6 "
		Little errands — dusts	7 "

examinations made during life Bronfenbrenner's cord studies also indicate positive pathology present in unsuspected cases

Pathological skull conditions are found frequently such as premature synostosis, asymmetries and the variety of abnormal external configurations Craniological pathological types include the brachycephalic dolichocephalic hydrocephalic macrocephalic microcephalic oxycephalic and scaphocephalic

One of the most recent contributions to the pathological knowledge of mental deficiency is a study of the cerebral arteries made by Bronfenbrenner and DeBaun[14] This study suggests a definite correlation between the mental capacity and the volume of the arterial system of the brain

Clinical Examination

Fernald and Doll claim that definite lines of inquiry are essential in a clinical study of mental deficiency Fernald's ten points have been mentioned Doll[1] designates as essential in a clinical study psychological social pedagogical medical somatic and hereditarial investigations

Tredgold considers that the data required for diagnosis may be considered under four headings family history personal history physical examination and mental examination

1 *Family History* — Investigations as to general family health ages at death and causes of death should be made Especial attention should be directed towards manifestations of neuropathic disorders mental deficiencies alcoholism and drug addiction

2 *Personal History* – An intimate investigation of the life history from the time of conception is of utmost value Information regarding the mother's health and mental state during gestation birth at term or otherwise condition of child at birth and immediately thereafter is of importance in determining the cause of mental deficiency

Inquiry as to size of child at birth age of teething walking sitting up talking control of sphincters accidents and convulsions also are essential Age admitted to school school progress school conduct and special aptitudes of the individual are items for consideration in the clinical study

Home environment size of the family position of the child in the family the child's disposition emotional status and general conduct should bear investigation

3 *Physical Examination* – A most thorough physical study is essential Facts to be noted include height weight general physique nutrition asymmetries anomalies cranial configuration acuity of vision and hearing condition of special organs respiratory digestive and genito-urinary tracts A complete

diagnosis are the individual's personality, adaptability, emotional status and moral sense

2 Physical diagnosis suggests three groupings 1 neurological types, 2 endocrine type and, 3 physically normal types

Included in the neurologic types are the micro-, macro-, and hydro cephalics, the cerebral palsies the Parkinsonians the post encephalitics, echolalics and all other neurological disorders associated with mental deficiency

Endocrinology is a positive factor in mental deficiency, and some endocrine types are classified as distinct entities while others are seemingly endocrinological yet difficult to classify The more common types include mongolism cretinism myxœdema hypothyroidism, hyperthyroidism pituitary dystrophy, acromegaly hypopituitarism pituitary obesity, thymic state, thymic giantism and eunuchoidism

In the physically normal types may be found mental defectives who show no sign of neurologic or endocrinologic stigmata

3 Type of defect in general may be classified as to etiology in two groups, primary and secondary In the primary group are placed all those whose condition can be classed as hereditary The secondary division includes those whose defect cannot be attributed to a known cause

4 Probable cause is often difficult to determine Three general divisions are possible 1 cause acting before birth (heredity), 2 causes acting at birth (birth injuries) 3 causes acting after birth (diseases or injuries from birth to puberty and their sequelæ)

Pathology

It is now generally conceded on the basis of many careful microscopical examinations by competent observers that mental deficiency represents pathologically an imperfect or arrested development of the cerebral neurons Histologically, Treadgold classifies the brain deficiencies into 1 numerical deficiencies 2 irregular arrangements 3 imperfect development of individual cells Wilmarth[13] and others have demonstrated varying degrees of sclerosis or overgrowth of the neuroglia The sclerosis may be diffuse or circumscribed

Gross developmental anomalies are not infrequent Some form of localized hypoplasia is found in nearly every mental defective's brain Porencephaly pseudo porencephaly hypoplasia of the cerebellum hydrocephalus, internal hydrocephalus, old encephalitis meningo encephalitis Wilson's disease meningeal hemorrhages and chronic meningitis are a few of the brain lesions not uncommonly discovered in clinical or postmortem examinations Cord lesions are found in postmortem examinations much more frequently than in clinical

that it affords a gauge of the perception of the relationship of object to object of parts to the whole both of which are most valuable faculties in life

Pintner and Patterson[13] have devised tests of performance which are in general use Included in these are the mare and foal test the five figure form board the two figure form board and the manikin test Each is designed for use at a certain age level and to elicit the planning ability of the subject

These tests may be supplemented by others at the discretion of the examiner From these tests it should be possible for the examiner to make observations on the child s cooperation attitude attention interest persistence emotional control comprehension judgment planning capacity initiative speed of reactions and ability to follow directions To obtain a fairly accurate qualitative analysis of intelligence several tests should be used Observations made on the results of one test are apt to be misleading

A mental examination is not complete with just a psychological study Equally important is the psychiatric study Factors considered in the psychiatric approach include the individual s general appearance attitude and conduct motor activity and coordination speech and the emotional state

The mental attitude of the defective should receive careful investigation for here at times is found the basis of various discrepancies in the psychological picture The attitude towards the home the school the environment the immediate family health sex and conduct all are important to know Last but not least to consider is the individual s trend of thought his desires and ambitions

In completing the psychiatric study it is important to have certain laboratory investigations made A blood count Wasserman reaction blood chemistry studies spinal fluid analysis basal metabolism estimation and x ray studies particularly of the cranium are not infrequently indicated

Diagnosis

In mental deficiency the question of diagnosis arises in various life periods In infancy or early childhood parents may be apprehensive because of delay in development In the early school years an inability to progress normally causes anxiety In adolescence antisocial tendencies or inability to hold a position may cause suspicion as to the mentality or intellectual development In each of these periods the clinical examination as outlined should be followed in order to reach a diagnosis

A number of conditions simulate mental deficiency in different life periods especially the less marked types of mental defect thereby making the positive diagnosis a matter of difficulty Considerable care in evaluating all factors is essential To arrive at a true diagnosis the examiner should have a wide medi

neurological study should be made noting coordination of movements, speech gait paralysis, chorea, presence of habits and the reflexes

4 *Mental Examination* — Mental investigation is divided into classes the psychological and the psychiatric studies Four distinct yet intimately related aspects of the individual mental defective are investigated in the psychological study They are intellectual ability, emotional stability, morality and sensitivity

Various types of tests have been devised and standardized to determine an intellectual level for each individual The majority of these tests are based on or related to the Binet Simon tests as modified by Terman In any psychological testing much depends upon the examiner and his methods Time and tact are essential for a worth while study and result For subjects of low grade mentality the Kuhlman revision of the Binet Simon test is used

Spearman[1] pointed out the fact that the method of scoring in intelligence tests is arbitrary and has no sound theoretical basis Various tests have, therefore been devised to remedy the limitations of other tests and to elicit the individual s special abilities or disabilities

Porteus[17] devised a test called the Porteus maze test This test was particularly useful with subnormal children to determine the important capacities of prudence forethought power to profit by experience and also gene al mental alertness The Porteus test is standardized for the various ages between three and fourteen years Inasmuch as the Porteus maze test requires motor response from the child while at the same time presenting an intellectual problem, it may also be used with the deaf, dumb and illiterate

Porteus tests consist of geometrical figures of increasing complexity printed in double outline in such a way as to enclose a space of about a quarter of an inch in width The subject is given a blunt pointer and is required to trace his way out of the maze between the guide lines It is found that subnormal children fail to appreciate changes in direction which the geometric figures take and that they frequently tend to round off corners In the tests from the eight to thirteen year levels there is but one route by which the goal may be reached Hence to succeed the child must look ahead in making turns and decide which direction he will take He is warned before starting to look carefully at the design and to avoid any blocked path

Dr Healy[18] in his work at the Chicago Juvenile Psychopathic Institute and the Juvenile Court devised a number of tests which achieved various reactions in his subjects These tests are considered standards in all psychological studies The Healy Fernald picture form board is an example This test brings out what the ordinary form boards bring out, namely, perception of difference in form, powers of coordination, ability to learn and success after experience of trial However, it goes a step beyond the ordinary form board in

health and development in the growing child and that deficiencies in nutrition may have effects It is, therefore logical to assume that malnutrition will have its effect upon the brain development Certain it is that nervous disorders are found more frequently in the undernourished child Treadgold feels that in spite of these facts it is rare for malnutrition per se to be the cause of mental deficiency Nevertheless the presence of malnutrition will lead one to look for other signs indicative of mental deficiency

In the differential diagnosis before concluding that primary mental deficiency exists one should eliminate malnutrition rickets anemia tuberculosis (all forms) encephalitis meningitis otitis media cerebral hemorrhage and syphilis In a given case the elimination of these conditions denote the strong probability of definite mental retardation If stigmata of degeneration or a definite morbid heredity are present the case may be diagnosed as mentally deficient

Delay in an infant s development along the usual line may lead one to suspect the presence of mental defect If a child of ten months fails to grasp objects to hold his head erect to sit erect or to follow an object visually one may look for further signs of retarded mental development A careful examination is indicated and may reveal the presence of cerebral or spinal disorders

Vision should be clearly evidenced at the age of six months hearing at the age of one month or earlier and tactile sensibility from birth Any delay in the development of these several special senses may indicate incipient mental deficiency

The development of speech function is largely an individual equation However if a child of two years makes no attempt to speak one may conclude that he is either feeble minded or mute

Dentition also is an individual problem in development. The twenty deciduous teeth should erupt before a child reaches the age of two and one-half years Rather wide variations are common Delay in dentition commonly is due to rickets however in cases of mental deficiency the delay is apt to be more protracted than in rickets

As the child grows older the difficulties of diagnosis lessen Evidences of retardation include delay in ability to walk talk and feed oneself and deficient sphincter control is highly suggestive of mental deficiency Sphincter control can be taught a normal child of three months If a child of two or three years has not acquired such control one should suspect some physical or mental defect and examine the child thoroughly for the same

Diagnosis in the early school years is reached by eliminating such conditions as mental inferiority due to physical defects of hearing vision and nervous disorders malnutrition epilepsy chorea neurasthenia congenital word

cal knowledge a general understanding of the functions and structure of the nervous system and the ability to recognize readily evidence of mental defects A fundamental knowledge of psychology is also essential in the armamentarium of the diagnostician The ability to understand and more especially to evaluate properly psychological tests is a distinct asset to the physician examining a suspected case of mental deficiency

In infancy and early childhood there are diseases and conditions which result in a lack of mental growth In the newborn infant one may detect listless indifference inability to suck, lack of cry or the reverse, or excessive motion restlessness and constant crying The average case of mental deficiency usually presents one of these pictures during the first few months of life Not infrequently it is the latter type which attracts attention The former is often considered a fairly good baby

In the newborn one should ever be on the alert to detect signs of birth injury If the labor has been in any wise abnormal, birth injuries may have resulted Paralysis in early infancy should be detected and treated promptly In cases of extreme listlessness a diagnostic spinal tap is indicated Presence of bloody fluid may indicate intracranial hemorrhage, and subsequent treatment would be governed accordingly

It is rather difficult to define clearly the cerebral birth injuries However certain types are recognized and frequently are associated with mental defect Congenital cerebral diplegia probably is the most common of the palsies of infancy In the more severe types the symptoms are present from the first day Characteristic signs are difficulty in nursing enfeebled respiration, general nervous irritability and excessive regurgitation Many of this type succumb and those who survive are always helpless, feeble physically as well as mentally and prone to convulsions and epilepsy

Congenital and cerebral mono and hemi plegias are not easily recognized in early infancy They are not necessarily associated with mental defect However, they should be recognized when the child is six or more months old by smallness of hand or foot contractures of muscles, athetosis of the affected arm and delay in functional use of the affected portion

Forbus[20] and others have called attention to the occurrence of congenital intracranial aneurysm The circle of Willis is the most common site Symptoms are manifested in two types one due to leakage and the other to pressure or rupture Presence of altered blood in the spinal fluid, which does not clot is found in the first instance The second is manifested by vomiting cervical rigidity and Kernig's sign The condition may be confused with pachymeningitis although in this condition the onset is not so acute

Malnutrition in infancy not infrequently has been considered a cause or indication of mental defect All clinicians recognize the importance of physical

TREATMENT

'Cures' of mental deficiency cannot be offered Treatment, therefore is a matter of developing by adequate measures the imperfect material discovered in the clinical analysis

Treatment will be discussed under four subdivisions medical and surgical educational social and preventive

Medical and Surgical

The great bulk of the medical treatment of the mentally deficient is essentially palliative and symptomatic These individuals are subject to all of the medical and surgical disorders which afflict the human race and for such disorders the treatment is the same as in the normal individual Greater susceptibility towards upper respiratory disorders mild digestive upsets constipation and minor infections is found in the mental defective Tuberculosis is common but malignancy is rather infrequent

Specific therapy has little application One exception may be made however in the case of cretins where thyroid therapy is of marked value

Endocrine therapy is quite popular and is applied frequently to these individuals in the hope that there may be an underlying glandular disorder Experience has shown that rarely is a case materially benefited by glandular therapy Some exceptions may be made in the case of the cretins previously mentioned and in certain thymic and pituitary disorders The mongolian often is given single and multi glandular preparations but as a rule the results are of little avail

Generally speaking a complete and thorough physical examination will reveal the essential factors for medical and surgical attention Presence of nasal polypi septal deviations or enlarged turbinates should be corrected by surgical intervention Congenital cataracts squints and corneal opacities require operative correction Enlarged tonsils and adenoids should be removed Hare lip cleft palate and tongue ties can be remedied The webbing of fingers or toes hernias phimosis hemorrhoids and muscle contractures require surgical methods Mental defectives react favorably to surgical procedures

Defects of vision are extremely frequent and require unusual care in refraction Eye exercises often are needed but difficult to accomplish due to the inability of the individual to cooperate

Skin disorders also are frequent in their occurrence Frequent bathing under proper supervision is essential to a healthy condition of the skin These defectives are prone to poor circulation and acid perspiration which is the basis of many of the cutaneous disorders

blindness or word deafness If none of these conditions are found to exist and the clinical study shows hereditary manifestations of neuropathic disorders physical defects or stigmata and an I Q below 70 to 80, the evidence is quite conclusive of mental deficiency

In many families the occurrence of a mentally defective child is a distinct calamity Such families are often unwisely encouraged by physicians, friends and others assuring them that the child will be "all right after adolescence" Generally speaking, it is far better for the families, as well as for the child, to face the problem as soon as a definite diagnosis is made Only by early diagnosis and subsequent proper treatment and training can the best interest of the child be served Most families will appreciate the physician who frankly discusses the problem of mental deficiency

Diagnosis in adolescence should be made readily by clinical examination The chief factors to be considered in the differential diagnosis are mental disorders such as schizophrenia, psychopathic personality and epileptic deterioration.

Prognosis

Medical science offers relief to sufferers of most pathological conditions and may hold out a reasonable prospect of improvement, but with mental deficiency nothing in the nature of a "cure" can be promised

Prognosis in relation to improvability is largely an individual equation However certain general statements may be made With training, supervision and a favorable *environment* definite improvement may be expected in all phases of mental deficiency except those in the idiot group The possibility of the individual becoming self supporting or even becoming a useful member of society is distinctly an individual problem

Special prognostic indications may be made in specific clinical types The mongolian imbecile rarely lives to be over 25 years of age However it is recorded that one mongolian reached the age of 61 The hydrocephalic types usually die in infancy and relatively few reach adult years

In general it may *be said that* unless adequate care and training are provided in the early developmental *years the* potentialities of improvement in the individual will never be *realized* There is a distinct tendency toward improvement under training during the early years and through adolescence General deterioration, both mentally and physically, is apt to occur relatively early Many mental *defectives* become physiologically old in what is commonly considered to be the "*middle life*" period

toning with resultant constipation is also common, and a carefully planned diet aids in correcting this condition

Educational

The fundamentals of the educational training of the mentally retarded were first propounded by Seguin and later elaborated upon by Montesorri Fernald Kerlin Barr Treadgold Penrose and others The children are grouped for educational purposes according to their mental capacity irrespective of their physical ages

The general principles of education are the same as for the intellectually normal the essential difference in the education of the subnormal is in method and application The basic desire of the teacher is to arouse the interest of the child and then gradually give him what his mind is capable of assimilating Repetition is the rule to follow Until a thing learned becomes practically a habit it is not fully grasped Teaching in the abstract is of little value because the mind of the mental defective is capable only of conceiving that which is concrete These children learn far better with their hands than with their heads

All humanity lives by its senses hence it is essential to pay particular attention to the cultivation of the sensory functions Training in motor functions is very important In general it may be said that definite mental growth will result from a systematic course of sensory training along physiological lines Since all mental activity is expressed by movement or inhibition of movement motor training and coordination is important

Educational training is divided into two groups The one type utilized in institutions and the other that of special classes in the public schools

The ideal purpose of educating and training mental defectives in institutions should be to give each child ample opportunity to develop according to his innate capacity to prepare the brighter children to return to society as self supporting members with adequate protection for themselves and society by means of selective sterilization and to make less expensive and more congenial the care of the lower grade groups

In order to approach this ideal special pedagogy is necessary Too much stress should not be laid on training along the usual academic lines but more on the practical application of all that is taught Physical industrial and vocational education are fundamental in institutional training One advantage of institutional education over that of the public school is the twenty four hour supervision

Inasmuch as institutional facilities can provide for less than ten per cent of the estimated number of mental defectives it is obvious that the major problem

It is obvious that such conditions as malnutrition, anemia, enuresis and congenital syphilis should receive proper medical attention

The various forms of paralysis call for the attention of the orthopedic surgeon Generally speaking, such operations should be of a fixation type when the child is known to be mentally defective If ankylosed in a useful position, the results are satisfactory This should be followed by proper training in the use of the affected parts, hydrotherapy, electrotherapy and massage all of which will require tremendous perseverance on the part of the nurses and teachers

Aside from these indications for special therapy, there is need for close attention to the general hygiene exercise clothing and the dietary The maintenance of physical well being can be accomplished by careful attention to general hygienic measures such as the care of the scalp, ears, teeth and bodily cleanliness Regulated exercise and physical training are valuable assets to the general health Clothing should be adequate in all seasons

The first consideration relative to the dietary is that it should be of good quality A good diet consists of the judicious blending of proteins, carbohydrates, fats, minerals water and vitamins Food provides for the building up and repair of body tissue the production of body heat and for muscular and nervous energy Proteins are essential to life in the building up and repair of tissues Protein food is derived from the flesh of animals birds and fishes eggs, milk and milk products and leguminous vegetables

Fats are important as sources of energy and body heat Principal animal fats are derived from milk, butter lard suet and the oils in oily fishes Vegetable fats include olive oil, palm oil and the oil from various nuts

Carbohydrates include all the sugars and starches Cane, milk and malt sugars fruit sugars and honey are the chief sugars Potatoes, rice, tapioca, cereals, wheat flour, oatmeal and corn flour are the principal starches

A certain amount of mineral is essential to life, phosphate of lime for bone, phosphates and chlorides of soda for body fluids and potash for muscles and blood cells Magnesia and the salts of iron are of value for blood and bone development

Inasmuch as water forms about 60 per cent of the body weight, it is quite essential Six to eight glasses of water should be included in the daily diet to maintain the body level of fluids

Vitamins have been shown to be of distinct value to health Diseases due to deficiency in vitamins are not uncommonly found in the mental defectives Sources of vitamins include eggs liver, butter yellow vegetables, yeast, peas beans, fruits fish liver oils and germinating wheat

The diet for mental defectives requires care in preparation because of the frequency of defective mastication Tendency towards sluggish digestive func

3 The Physically Handicapped – mental defectives with physical handicaps are primarily institutional cases

4 The Aged High Grade – senile defectives are more economically maintained in almshouses than in training schools

5 Clinical Types – this group is unsuitably maintained outside of institutions

6 Neuro-psychiatric Types – *mental defectives with epilepsy or neuro*psychiatric disorders are properly institutional cases

7 Well adjusted Young High Grades – best suited for special class training and community care

8 Well adjusted Adult High Grades – require community supervision under well considered programs of occupational placement and home care

Supplementing the mental diagnosis with a social classification the social care of the mentally deficient would be distributed into three permanent subdivisions institutions public schools and community welfare organization. This would permit the institutions to accept train sort and return to the community those suitable The public schools should cooperate with the institutions and train under special class control those suited to its facilities *and send to the institutions the low grade types and the physically handicapped*

This program leaves the bulk of the burden in the hands of the community welfare organizations Yet in rural areas community supervision is practically impossible

The institution as a social adjustment factor has been widely discussed Much of this discussion centers around parole and colonization schemes Under the usual parole plan cases considered suitable for community life are given a trial under the strict supervision of a field worker the length of the parole status being an individual equation Wallace Fernald Bernstein Little and Green and other superintendents of state institutions have reported considerable *success with the parole system The problem of sex is the chief handicap in* any parole plan

Credit for the successful colony idea goes to Dr Charles Bernstein of the Rome State School Rome New York although other institutions such as Syracuse New York Fort Wayne Indiana Waverly Massachusetts had attempted colonization earlier The establishing of properly supervised extra institutional colonies is not without hazards but it does have a distinct place in the social adjustment of the mentally retarded

There is a tremendous challenge to the public schools in their problems with the mentally retarded Volumes are written on this phase of social *adjustment yet no ideal plan has been found to fit the problem Special* classes have been provided since 1894 in ever increasing numbers

in their education rests with the community. There are various ways in which the educational needs of the retarded child in the community life are being met. Some of the methods used are special classes with specially trained teachers, visiting nurses, vocational guidance, mental hygiene and child guidance clinics and educational counselors.

The special class with a specially trained personnel and a modified curriculum is in wide use. However, the number of special classes provided are inadequate to the numbers needing special education. Furthermore, the curricula are not properly arranged for they lack diversification and tend to emphasize the academic education. The ideal special class would provide a course of training in which the academic activities grade according to the child's capacity and all other training be eminently practical.

Sociological

Davies[21], Berry and Gordon[22], Yepsen[23], Doll, Bernstein and others have, for many years laid great stress on the social management of "control" of the feeble minded. Yepsen sums up the social equation saying: "It is evident that as the social order is definitely changing and as the old 'laissez faire' of the past gives way to planned action of the future, the problem of the feeble minded is an integral part of the total social problem."

Inasmuch as over ninety per cent of all the mental defectives are outside of institutions, it is evident that their social adjustment is a problem of major importance. The total number of mental defectives is, therefore, a point of first importance. Conservative estimates place the number at one per cent of the total population or in these United States about 1,250,000. Of course these mental defectives represent all grades of society but the greater majority are from the lowest social stratum. More than fifty per cent come from the lower divisions of the social order.

The care and control of the defectives in the population has now largely become a State responsibility and yet no state has developed a complete program for the mentally retarded within its boundary. State agencies seem more concerned with the coordination and general direction of their institutions and they assume little responsibility for the defectives outside the institutions.

President Hoover's White House Conference organized a sub-committee on mental deficiency to study, in part, the social disposition of the group. This committee advocated a social classification as follows:

1. The Low Grade — distinctly institutional cases.
2. The Unadjusted High Grade — distinctly institutional cases because they constitute a nuisance or menace to communities.

defective The idea of prevention had not been evolved In 1876 when the organization now known as the American Association on Mental Deficiency was organized it was thought that segregation would solve all the problems of mental deficiency Next restrictive marriage laws were enacted with the idea of preventing the marriage of mentally defective individuals About fifteen states have such laws at the present time With the establishment of special classes in the public schools the accent again was placed on training About 1893 institutional parole systems had their beginnings Community control plans were later developed to improve the environment for defectives Birth control has had its advocates for two or more decades who claim much for this method of prevention of propagation among mental defectives Birth control has yet to receive any substantial endorsement by competent medical authority or medical organizations However it is a method which has distinct possibilities where the individuals are of sufficient mentality to understand its use

Of all the methods mentioned segregation and selective sterilization offer the most in actual prevention of mental defectiveness However in actual practice it will be necessary for segregation to bear the brunt of the problem When the organizations opposing selective sterilization are made to realize its value then it will become the greatest single factor in the prevention of mental deficiency Selective sterilization when adequately safe guarded offers little or no danger to the individual or to society

The operations for sexual sterilization are relatively simple and are not of a mutilating type No organ is removed from the body Operative procedures as practiced today simply seal the tubes through which the reproductive cells must pass i e the vas deferens in the male and the Fallopian tubes in the female

Special Types of Defectives

Certain mental defectives present special characteristics which place them in a group of distinct clinical types This group includes microcephals hydrocephals cretins hypertelorism amaurotic family idiocy idiots savants echolalics and mongolians

Microcephaly[7] is considered in evidence when the cranial circumference is three or more inches less than the normal average for the age and sex The degree of intellectual deficiency is not always in proportion to the smallness of the cranial capacity Physical characteristics commonly found in microcephals include angular features long arms and legs large hands and feet and unusual muscular strength The macrocephalic head does not necessarily denote mental deficiency hence is not included in this special type classification

Davies is optimistic with regard to the possibilities of the public schools stating When the public schools shall have fully recognized that they have no right to deprive a child of educational advantages suited to his needs just because he appears on one of the lower levels of the intelligence curve and when they shall have provided an adequate number of special classes supplemented by competent psychological psychiatric and visiting teacher service then a large part of the problem of mental deficiency will have been solved

Lastly comes the community supervision in the social adjustment of the mental defective It involves the home, the school, the institution the court, vocational training and a program of adequate mental hygiene The socializing process within the community is in too immature a state of evolution to evaluate properly or even to discuss in detail in this chapter as it is still highly experimental and in a state of growth and change

Prevention

Absolute prevention of mental deficiency is impossible to obtain However certain factors can be considered as essential in a definite program of prevention These factors include prenatal treatment of high quality for all expectant mothers greater care exercised in the practice of obstetrics rigid adherence to measures of social hygiene for the elimination of syphilis and gonorrhea, early and adequate immunization of children against diphtheria, smallpox scarlet fever measles whooping cough etc, and the sexual sterilization of the hereditary types of defectives

Discussion of the treatment of mental deficiency is incomplete without reference to sexual sterilization Landman[21], Watkins[2], Whitney[3] and others have presented the subject of sterilization for mental defectives, giving the argument both for and against the measure The medical profession in general and especially those psychiatrics in the field of mental deficiency agree that selective sterilization should be practiced The American Association on Mental Deficiency has endorsed the measure Sterilization of selected types of mental defectives should be a part of the routine treatment of mental deficiency

Sterilization of the hereditary types of mental defectives is a controversial subject largely because of the attitude of certain ecclesiastical pronouncements against such a measure However, to those who have devoted time, effort and study in the realms of mental deficiency it seems to be a logical procedure When it is so generally recognized that defective germ is the most potent cause of mental deficiency it would seem that measures to prevent the continuance of that germ plasm in the race were essential

Prior to 1848 no state of the Union had thought seriously about the mental

J Langdon Downs[2] in an ethnic classification of defectives coined the term ' *mongolism* This term is still applied to a group of defectives who bear a certain superficial resemblance to the Mongolian race Seguin n 1843 described this group Brosseau and Brainard[31] Crookshank[32] Whitney and associates[33] have written extensively on the subject Treadgold states that this group represents about five per cent of the total number of mental defectives While there is no single feature in the physical characteristics that may be considered distinctive of the group there are a combination of defects or anomalies which make up the composite picture of a typical mongolian Mentally they grade from the idiot class up to the lower limits of the so-called moron They are placid affectionate active imitative and are easily managed

The most frequent physical characteristics to be found are head — microbrachycephalic eyes — narrow oblique palpebral fissures nystagmus and strabismus blepharitis ectropion chronic conjunctivitis ears — small and malformed tongue — traverse fissures hypertrophied papillæ nose — flat and depressed hands — short and stumpy with spreading tapered fingers, the little finger being short and in curved palmar creases are abnormal feet — broad with wide gaps between toes joints — hyperflexible, skin — smooth in the young — dry and scaly in the older children

The etiology of mongolism is obscure Many theories have been advanced but none adequately explain the condition Mongoloids are found in all races and classes of humankind The prognosis as to life is not favorable Few mongolians live beyond the twenty fifth year The chief causes of death are tuberculosis respiratory diseases and heart lesions

In the differential diagnosis the chief condition to be considered is the cretin Table I shows differences between mongolism and cretinism

TABLE I

	Mongolism	*Cretinism*
Skull	Small and rounded	Not small and of normal shape
Eyes	Oblique and narrow palpebral fissures epicanthus st abismu and speckled iri es common Bl pharitis frequent	Palpebral fissures horizontal and small owing to swollen eyelid
Tongue	Hypertrophied papillæ and fissures pre ent	Tongue normal in appearance
Nose	Squat and depressed	Widely expanded alæ pug shaped, with nostrils pointing outward
Forehead	Smooth	Horizontal wrinkles
Skin	Smooth at first later dry and scaly *Flushed cheeks often present*	Dry and scaly boggy and redundant. *Complexion sallow or olive tinted*
Hands	Short and tumpy with spreading fin gers short and incurved little fin gers abnormal palmar creases	Stumpy and boggy but little fingers and palmar creases are normal

Most *hydrocephalic* children die in infancy Those who survive may represent any mental capacity from the idiot to the dull normal level The physical characteristics include prominent frontal bossæ enlarged superficial veins of the scalp enlarged and somewhat sunken appearing eyes, relatively small or dwarfed body giving a ' top-heavy ' appearance

Cretinism does not of necessity indicate mental deficiency However, the untreated cretin is a potential case of mental deficiency, and many of the cretinoid type are to be found in all large institutions Thyroid deficiency resulting in cretinism presents ome of the following characteristics stunted or dwarfed bodily growth protuberant abdomen, rough, thick, dry, boggy, redundant skin which is apt to be cold and clammy, broad and clumsy hands and feet, apathetic facial expression and hyperflexible joints

Greig[8] in 19 4 described a rare clinical form of mental deficiency which he named hypertelorism Braithwaite and others have described other cases since Greig s first description The essential characteristic is a *great* breadth between the eyes due to an abnormal growth of that portion of the sphenoid bone which arises from cartilage The skull is brachycephalic the frontal eminences are prominent, and the occiput is fattened The no e usually is small and broad, the ears are large and stand out from the skull the mouth usually is open with the tongue protruding, and the palate is high and has a narrow arch

An unusual and uncommon condition known as *amaurotic family idiocy* was first described by Warren Tay in 1881 Sachs[29], Kingdon and Russell[30] and others have given full clinical and pathological accounts of this condition It is apparently a self limited condition, usually fatal between the ages of one and three years Three distinct pha es are recognized clinically First, at the age of three months muscular weakness is observed and a little later eye ground changes in the macula lutea The second stage is characterized by the infant s inability to sit up to turn to either side or to hold the head up The muscular weakness is increased In the third state emaciation is shown with increasing weakness exaggerated reflexes and at times convulsions During the course of the condition the temperature pulse heart lungs and gastrointestinal tract are apparently normal It occurs almost exclusively in Hebrew families

The *idiot sa ant* or learned idiot is a rare type of defective characterized by unusual talent in one or more directions but with marked mental deficiency in all other directions The idiot savant possesses exceptional talent for music, art mathematics and has a phenomenal memory He may be considered the genius of the mental defectives

Echolalia is a speech affection found in mental defectives and characterized by a tendency to repeat words or phrases spoken by others in the same tone in which they were originally spoken

of prevention is emphasized the social aspect will become burdensome to normal citizens To attain the best for society and for the individual mental defective the facts must be made known It is for the physicians psychologists social workers and teachers to make the facts in each case known Then by facing these facts and acting in the light of the knowledge thus acquired may the maximum good for the mental defective and for the community be attained

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TABLE I (*Continued*)

	Mongolism	*Cretinism*
Feet	Wide gap between first and second toes with deep furrow	No enlarged gap but skin very loose around ankles and on dorsum
Joints	Hyperextensile	Normal
Thyroid Gland	Usually palpable	Absent but fatty tumors in neck
Expression	Vivacious mobile observant	Immobile heavy apathetic
Temperature	Normal	Subnormal
Mucous Membranes	Recurrent catarrhs	Normal
Result of Thyroid Treatment	No change in physical signs	Rapid disappearance of physical signs

The treatment is medical and educational Glandular therapy is of little or no avail Symptomatic treatment is to be followed as indicated Pedagogical training to the level of the ability of an individual case is advised

Research in Mental Deficiency

Opportunities for research in the field of mental deficiency are many Various lines of investigation are being carried on in many institutions, but the work needs correlation and general supervision Some of the conditions found in or associated with mental deficiency offering opportunities for intensive research are convulsive disorders meningitis, encephalitis infantile paralysis etc neuro muscular disorders paralysis etc, pathological studies of the brain and spinal cord blood glandular functions, ophthalmological conditions and behavior problems

Summary and Conclusion

Mental deficiency represents a problem which is essentially medical It also represents a distinct problem in psychology, sociology and pedagogy However it is not an insurmountable condition Considerable aid can be given to those so afflicted by adequate diagnosis, treatment, supervision prevention and research

Davies accents the social control standpoint when he states "Progress in solving the problems of mental deficiency depends upon the degree and kind of social control, or to be more exact of social self-control which is exercised From the social point of view the hopeful fact lies in diverting the social usefulness of the mentally deficient into as many channels as possible That this can be done is encouraging sociologically but unless the medical responsibility

CHAPTER V

PSYCHOPATHIC PERSONALITIES

By F. A. FREYHAN

TABLE OF CONTENTS

CONCEPT OF PSYCHOPATHIC PERSONALITY

The concept of phychopathic personality concerns individuals with characterological abnormalities These abnormalities do not constitute a nosological entity one cannot reduce them to simple formulas of characterization but one must evaluate them from the point of view of individuality From the very outset we must clearly understand that there are no one sided criteria biological psychological or sociological to guide us through this vast territory of personality aspects We are confronted with a wide variety of dysfunctions of the personality of which either the concerned individual or society becomes aware For the purpose of clinical analogy we may think of the field of allergy which, far from being an entity comprises many phenomena that have in common altered reactivity This may be of a minor nature may remain latent most of the time or lead to more or less severe disturb

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idleness antagonism asocial behavior based upon suspicion and the like inability to socialize on account of fear attitudes of dependence inability to perform normally in the social life because of any illness whether mental or physical Such persons are regarded as pre eminently sociopathic they are very numerous there are recognizable patterns of behavior which they adopt Antisocial motivation becomes the criterion par excellence For other deviations in personality Partridge favors the term pathological personality While the acceptance of these criteria has remained limited the essential idea of equating psychopathy with antisocial behavior has gained popularity during recent years

The *etiologic approach* involves fundamental concepts of personality A most comprehensive formulation was made by Kahn in his investigations of psychopathic personalities His concept is set against the background of personality development and organization Referring to developmental anachronism he stresses that psychopaths differ quantitatively not qualitatively from normal people Personality functioning is related to three main structures namely impulse temperament and character Impulse in Kahn s sense means an animal vital urge toward an ultimately biological satisfaction of need' Impulse is manifested by the output of energy the drive of the person An impulse process is found at the root of all psychic activities Temperament is the transformer of the impulses the manner in which they show themselves He states that temperament comprises mood and affect Moods are brought about spontaneously or reactively They are the medium of the emotions and they give color to and are colored by particular experiences Kahn differentiates between the fundamental mood and the reactive emotionality The fundamental mood is the state of feeling tone characteristic of the individual Character is defined as the directedness of the personality or the steerage toward a definite goal Kahn points out that character has a purposive side that it is the recipient and administrator of goals purposes and values which the person may find or produce in his situation Character is that aspect through which the goals and values are filtered

Kahn discusses psychopathic personalities in terms of abnormalities in the inter relationship between impulse temperament and character Sexual deviations are seen as inherent impulsive anomalies Here are included masturbation homosexuality pedophilia fetichism sadism and masochism Disturbances of temperament produce distinctive patterns of fundamental mood (1) hyperthymic cheerful excitable and explosive (2) hypothymic phlegmatic torpid affectless (3) dysphoric

ances necessitating major changes in the individual's life pattern because of the impaired functions in a certain milieu. Psychopathic states, similarly, can be of mild or serious nature depending on the extent to which they are in interference with the functioning of the personality.

In terms of a general description, psychopathic personalities have been characterized by emotional immaturity or childishness with marked defects of judgment and without evidence of learning by experience. They are prone to impulsive reactions without consideration of others and to emotional instability with rapid swings from elation to depression, often for apparently trivial causes.

In the present diagnostic classification of the American Psychiatric Association these personality disorders are characterized 'by developmental defects or pathological trends in the personality structure' and 'manifested by a life-long pattern of action or behavior, rather than by mental or emotional symptoms.' The clinical divisions include 'inadequate personality,' characterized by inadequate response to intellectual, emotional and social demands, 'emotional unstable personality' pertaining to persons who react with excitability and ineffectiveness to minor stress and 'chronically antisocial individuals' as well as sexual deviates and those addicted to drugs and alcohol.

While it is impossible to outline the historical background of the concept of psychopathic personality and do justice to the many valuable contributions, it may be worth while to consider some divergent points of view to demonstrate the variety of approaches. There is the *symptomatic approach*. Types of psychopathic conduct are described in relation to the prominent clinical symptoms, for instance, impulsiveness, eccentricity, emotional instability. Among the many contributions based on clinical studies the work of Schneider reveals intense clinical insight and gives detailed portraits of psychopathic personalities, which he divides into ten groups. Here are included hyperthymic, depressive, fanatic, explosive, weak willed and cold psychopaths. The main interest of the *sociologic approach* centers on the fact that the psychopathic personality, because of the deviation from an average pattern of behavior, comes not infrequently into conflict with the mores and laws of society. Socially unconventional behavior that seriously interferes with adjustment is accepted as evidence of psychopathy. Partridge proposed a classification in terms of socialized behavior and brought forward a formulation of 'sociopathy'. Recognizing distinct degrees of sociopathic behavior, he identified criminality, vagabondage, habitual

correspond to the genius type He defines genius as a quality which almost transcends human understanding not as one sided but as spreading into various fields as universal and as occurring in a person who may never have had the advantages which high birth education and material endowment such as riches confer Genius is being associated with a state of mental imbalance of heightened sensitivity of disordered mental equilibrium due probably to the attempt to get square with reality and even more to dominate reality as a compensation for the inner unresolved conflicts which dominate conduct As characteristic examples he analyzes the personalities of T E Lawrence of Arabia and Joan of Arc The work of the genius he believes may be accomplished when self consciousness reaches a state or degree of dissociation Henderson concludes that a close correlation between psychopathy and genius exists

Alexander formulated the concept of character neurosis in reference to persons who suffer from no very definite symptoms of illness but whose behavior in life is in the highest degree impulsive and even compulsive The neurosis is quasi built into the character Alexander contrasts the behavior of the neurotic character with that of the neurotic psychotic and truly criminal personality In terms of psychoanalytic dynamics the differences are based on the ability of the ego to reject unconscious impulses In neurosis (personality) conflict is strong The unconscious impulses manifest themselves by means of substitutive gratification In the case of neurotic character conflict is also present but the unconscious impulses manifest themselves by means of neurotic acting out which brings true but disguised gratification The truly criminal personality knows no conflict The unconscious impulses are unmodified and uninhibited Alexander s fundamental criterion for behavior disorders is the varying ability of the ego to reject unconscious impulses The neurotic individual has the greatest capacity to do so whereas the criminal has none Alexander s concept of character neurosis has since been greatly expanded by other psychoanalysts whose interpretations based on intensive case studies have contributed most significant data on the psychodynamics of psychopathic behavior

Several authors have emphasized the polarity of certain neurotic and psychopathic phenomena Michaels and Porter analyzed a series of 1 383 psychiatric cases in the armed forces and were impressed by the low incidence of compulsion neurosis and the much higher incidence of psychopathic personality Comparing their findings with similar studies in the British and Canadian forces they found this to be a consistent

morose, gloomy, irritable, anxious, (4) poikilothymic-cyclic variety of moods Impulse and temperament constitute the biologic basis for character The development of character is influenced by the impact of social environmental forces on the person Characterologic types are differentiated on the basis of ego evaluation Kahn postulates the ego type whose ego overevaluation expresses itself as egocentricity and autism This type of character seeks power, prestige, and mastery, and it includes aggressive delinquents and hysterical individuals The antithetical type is the environmental type whose ego underevaluation expresses itself in form of inferiority feelings, resentment, and suspiciousness and paranoid and hypochondriacal behavior is associated with this type Complex psychopathic personalities are the hysterical, the hypochondriacal, the sensitive the anancastic, the eccentric, the asthenic personality Kahn s theory analyses the etiologic implications of social maladjustment on a broad basis and deals with fundamental personality functions regardless of conventional distinctions between normal neurotic, and psychopathic

'Psychopathic state is the name Henderson applies to those individuals 'who conform to a certain intellectual standard sometimes high, sometimes approaching the realm of defect but yet not amounting to it, who throughout their lives, or from a comparatively early age, have exhibited disorders of conduct of an anti-social or asocial nature usually of a recurrent or episodic type which in many instances have proved difficult to influence by methods of social, penal and medical care and treatment and for whom we have no adequate provision of a preventive or curative nature Henderson comments on the etiology On the surface it would appear that this was indeed a heterogeneous group with no uniformity as to cause course outcome or psychopathology but a closer view discloses a binding thread running through the constitution and psychobiological development of the affected individual' His clinical approach distinguishes (1) predominantly aggressive, (2) predominantly passive or inadequate, (3) predominantly creative psychopathic states Included in the first group are those who attempt to injure either themselves or others those addicted to drugs or alcohol the epileptoid and the sex variants The second group comprises schizoid states cycloid states the emotionally unstable erratic, sensitive and excitable types Henderson sees a relationship of a more or less specific psychopathic state to certain cycloid schizoid and paranoid states The individuals who constitute the third group

ological aspects of psychopathic personalities has been a traditional obstacle to a systematized arrangement. There seems to be no limitation to the diversity. Any attempt of classification will unavoidably lead to generalizations. An appraisal of the many contributions discloses dissenting points of view. No agreement exists as to the criteria to be used or the limitations to be placed on the use of the term psychopathic personality. Because of this the position is frequently taken that classification of personalities constitutes mere labeling and should be abandoned in favor of dynamic formulations of the individual's social adjustment. Consequently clinical portraits are preferred to elaboration of types. The type approach has been severely criticized and rejected. For the sake of intellectual clarity we must keep in mind that type was never meant to be a designation for a reality but for use as an abstract formulation of characteristics common to groups of persons generally observed in clinical practice. The danger with typologies lies perhaps not with the conception but with the unimaginative application; this holds true also with even the most dynamic formulation if used in a standardized mechanical fashion. Science means systematized knowledge, and systematization does not present a dilemma if the selected criteria refer to fundamental characteristics.

One is tempted to question whether *social behavior* per se qualifies as a fundamental criterion. The behavior of individuals in situations, i.e. the immediately observable behavior, constitutes only the last link of a chain of personality functions. To understand its meaning we need to know its experiential and motivational sources. From the viewpoint of the superficial observer certain modes of behavior, for example acts of violence or anti-social attitudes, appear identically abnormal. For the psychiatrist not the final act but its promoting factors decide the question of psychopathy. Law breaking, delinquency of one kind or another, or socially unconventional behavior when used as diagnostic criteria for psychopathy are about as distinct as crippling is a diagnostic criterion for arthritis. The purely sociologic evaluation does not promote deeper understanding of the involved inadequacy of personality functioning. Moreover social conformity means different things to different judges of human behavior; it depends on the social philosophy of the judging person. Some are too much devoted to the exposition of a principle which makes getting on in the world practically an article in a religious creed. Dissatisfaction with a state of society, i.e. maladjustment, has often worked as a catalytical agent for religious, social

trend throughout the reports Men with compulsive characters made good records because their rigid patterns of behavior caused them to be steady and reliable Compulsive traits were associated with strong characters impulsive tendencies with psychopathy It is concluded that trends toward psychopathy are more incompatible with military life than tendencies to be rigid or compulsive The individual with a compulsive character finds himself in the service in a compulsive milieu with which his tendencies harmonize The surmise is advanced by these authors that a degree of compulsiveness is generally essential to strength of character that the compulsion neurosis represents a pathologic extreme of deviations from the mean generally useful in civilized society while the psychopathic personality represents pathologic deviations in directions likely to lead to difficulty in adjustment in modern culture

Nielsen and Thompson commented on the dissimilarity between the symptoms of psychopathic personalities and the basic symptoms of the psychoneuroses and give the impression of incompatibility between the psychopathic state and the psychoneuroses which seem to be at opposite extremes with regard to personality function These authors speak of the incapacity for application of time as the pathognomic sign of psychopathic personality The psychopath they believe takes only the short term view of life Long term planning is distasteful undesirable and even impossible and useless The psychopath's planning is done for the immediacy of the moment This then gives rise to a series of secondary symptoms among which lack of guilt feeling absence of sense of gratitude justification of the means by the end to be attained disregard for the consequences of actions and a peculiar ability to ingratiate himself are outstanding

These brief references reveal the general trend of divergent approaches to the concept of psychopathic personality The differences are often more a matter of emphasis on particular personality aspects than of disagreement on diagnostic fundamentals

The Problem of Arrangement of the Psychiatric Material

Psychopathic personalities do not suffer from a disease but are individuals who differ from normal people in their manner of human existence (1) in the manner in which they experience themselves and their positions in the external world (2) in the manner in which they impress people through their behavior The multiplicity of character

mature since he still wants to continue to do the things of youth whereas the second person has now reached the stage of fulfillment i e, maturity

In a brief summary of the preceding discussion it may be said that the current usage of the term psychopathic personality shows some confusing features because its meaning cannot be approached in simple terms of behavioral description and secondly because of growing resistance to type elaboration Furthermore we find today a distinct tendency to restrict the usage to such personalities not covered by criteria which have been established for neurotic and pre psychotic (cycloid schizoid) personality disturbances The considerations presented here are shaped to help the physician in getting a grasp of fundamental personality forces manifested in the clinical phenomena This means that the viewpoint here is functional rather than symptomatic In psychiatry as in all other branches of medicine of today orientation is directed toward progressive understanding of the principles of function and dysfunction of the total organism We are less interested in the generic than in the individual aspects of the person In psychiatry we are especially interested in the problem of individual experiences their elaboration transformation and final effects Our advanced knowledge in these fields enables us to form certain concepts of main aspects of personality functions which will then permit us insight into modes of dysfunctioning that create the main characteristics of psychopathic personalities

On The Relation of Individuality to Personality Functions

For a comprehensive understanding of motivation we must focus our attention not only on what people have in common but on what is unique in each Not too many years ago human blood was assumed to be of identical composition With the beginning of this century the concept of a species plasma developed into one of individual plasma It is now the trend of all modern investigations of the human individual to bring out the components of individuality

If we conceive of the individual following the formulation of Leo Loeb as a mosaic of many tissues and organs each one functioning in its own peculiar way we may consider this mosaic of separate parts as the biological basis of individuality There is however in addition to this mosaic basis of individuality another basis There are properties

and philosophical movements of great consequence There is always the danger of equating maladjustment with a lack of material achievement or of applying a non valid uniformity of values to individuals of basic inherent differences The activities of the contemplative mind can hardly be judged in terms of attitudes characteristic of the bold and aggressive person Orientation toward goals and values are primarily influenced by the basic components of the personality That is why criteria of human behavior must be selected in a manner that excludes subjectivism as much as possible As one examines the validity of 'emotional immaturity' or 'childishness' one cannot, I believe it is fair to say help but wonder how such criteria are to be evaluated with any measure of objectivity No doubt there are many cases when classifications to this effect will seem generally acceptable Yet it may be argued whether a definition of immaturity may be correct, since it is based on the assumption of a hypothetical level of maturity that could be expected from all individuals of certain ages Every practicing psychiatrist will remember staff meetings where such classifications were contested because no agreement could be reached on what constitutes maturity or childishness There can be little doubt that individual variation is a factor of primary significance with regard to developmental aspects of personality Emotional growth does not follow a single pattern of levels of maturity It must be judged against the background of the characteristics of a given personality and the individual life situation To a person of restrained and conservative stature the activities of a vivacious, ever-youthful individual will look suspiciously immature if not frankly childish A college athlete whose motivational organization seems dominated by muscular activity reaches an optimum moment of maturity during his period of successful adjustment i e during the years of competitive activities In later life he may be relatively maladjusted because his inner orientation is toward the activities of youth in accordance with his potentialities By contrast the inhibited socially reserved individual whose capacities are predominantly in the realm of intellectual activities may appear to grow more slowly reaching maturity in the later periods of life when he forms his philosophy of living on the basis of accumulated experiences If we were to compare these two individuals at the age of 20 the former would seem mature and well adjusted the latter sophomoric and perhaps dependent on idealized figures On the other hand 20 years later the one time athlete may be maladjusted and from the viewpoint of one observer or another, im

physiology of both prenatal and postnatal development The function of the nervous system is to maintain the integrity of the organism The nervous system grows according to its own intrinsic pattern and thereby establishes the *primary forms of behavior* The *primary attitude of the organism* and the initiative of attitude are thus intrinsically determined The antithesis of fixity and flexibility of response is resolved since the mechanism of maturation is intimately associated with a mechanism for specific adaptions These two mechanisms are not discrete nor does environment operate on one to the exclusion of the other but they function together as a single force Gesell s studies of developmental correspondence in twins revealed that the inborn traits however much specifically modified and inflected by environment were determined *by maturation with regard to their initial manifestations He opposes* the claims of extreme versions of conditioning theories and emphasizes that innumerable behavior patterns and pattern trends are inherently *determined and although adaptive and responsive to environment* they are in no sense derived from the external environment

The growth of science during recent years has brought a much larger body of workers into active critical work concerned with development behavior and behavior disorders of the personality These studies which in former years were not available to psychiatrists contribute to attempts of re evaluation and reformulation of concepts on personality function that *are* of basic importance for the understanding of those abnormal personalities considered to be psychopaths Many of the generalizations in that field of psychiatry and many of the stale arguments of dogmatic schools of thought can be avoided if some of the trends and developments in the field of broad personality study are synthesized It is especially the shift from behavioral categories to assessment of aspects of individual variation that has emerged as a main trend in the type of thinking and research now current

Some Investigated Aspects of Individual Variation

Any system of analysis aimed at comprehension of a fragment of personality must if it is not to fail in its purpose deal with the total personality Psychoanalysis attempts to penetrate deeply into the motivating mechanisms lying behind consciousness To facilitate an effective attack on the general problem of analysis so that analysis might become not merely psychoanalysis but general constitutional or total

which are not restricted to certain parts of the organism but which bind them together make them into a unit, and differentiate one individual from every other individual The particular characteristics inherent in every higher individual organism, which distinguish one individual from another are designated as his *individuality differentials* The organism is accordingly a harmonious whole, not only functions are adapted to another but also all the various tissues, though apparently functionally unrelated are specifically adapted to one another, owing to the nature of the individuality differentials Physiologically the individual remains bound up with his organism and the needs and functions of the latter direct and influence his behavior Individuality differentials which determine specificity of tissue reactions immunologic processes hormones growth etc also limit in a certain way the mental milieu to which the individual is able to adapt himself Mental processes function in a definite mental milieu in a medium of nerve and endocrine gland activity to which the individual is adapted As Loeb states We have adapted ourselves to a certain intensity of feeling energy or lassitude to a certain kind of emotional reaction to a certain mode of thinking and rhythm of reactions taking place within ourselves and within others We are here concerned with those individuality differentials that influence the patterning of behavior

It is generally realized that great complexity exists in the interaction between the outer and inner milieu of the individual Plasticity of the organism particularly the nervous system adaptability to various external factors regulate reactions as well as inherited features which give rise to structural metabolic and functional conditions in the individual Gesell has eliminated some of the contradictions that existed between theories exclusively concerned with *either* heredity *or* environment He stressed the fact that such a separation occurs merely in analytic thinking for in actual nature such separation would lead to instant death of the organism Gesell indicates the role of maturation in the early patterning of child behavior No absolute distinctions can be drawn between physical and mental developments they occur in close association and may be considered basically unitary Maturation is envisaged as the intrinsic component of development which determines the primary morphogenesis and variabilities of the life cycle Genes he states should not be thought of as little eugenic packets that determine hereditary characteristics prior to birth but should be thought of as the biochemical agencies that constantly participate in the complex

physiology of both prenatal and postnatal development The function of the nervous system is to maintain the integrity of the organism The nervous system grows according to its own intrinsic pattern and thereby establishes the primary forms of behavior The primary attitude of the organism and the initiative of attitude are thus intrinsically determined The antithesis of fixity and flexibility of response is resolved since the mechanism of maturation is intimately associated with a mechanism for specific adaptions These two mechanisms are not discrete nor does environment operate on one to the exclusion of the other but they function together as a single force Gesell s studies of developmental correspondence in twins revealed that the inborn traits however much specifically modified and inflected by environment were determined by maturation with regard to their initial manifestations He opposes the claims of extreme versions of conditioning theories and emphasizes that innumerable behavior patterns and pattern trends are inherently determined and although adaptive and responsive to environment they are in no sense derived from the external environment

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analysis has been the aim of Sheldon His approach to the study of personality concerns the structure of the body and the functions of its organs as well as the manner of a person's thinking feeling and willing It is the object of Sheldon s research project, which has been in progress for more than a decade to lay the foundation for a 'psychology of basic individual differences' first by devising a technique for describing human morphology in terms of continuous variables, and second by defining and measuring analogous first-order variables of temperament His work is based on Kretschmer's view that there is a correlation between recognizable morphological and psychological types Sheldon saw Kretschmer engaged in a Laocoon like struggle with the manipulation of types and their interminable intermixtures' In his opinion Kretschmer's conception of polar types implies a trimodality of distribution which is untrue to life There are not three kinds of people but a continuous distribution of people and physiques Sheldon formulated the idea of varying components instead of types The somatotype is a series of three numerals each expressing the approximate strength of one of three primary components of morphology Designated endomorphy mesomorphy and ectomorphy all three components are present in varying degrees in each individual By development of a rating scale and technique the relative strength of each component is assessed for each individual The somatotype provides the basis for a morphological taxonomy that is comprehensive and statistically manipulatable The bugaboo of types thus disappears in a continuous distribution in which every physique has a place Determination of primary components of morphology is followed by evaluation of secondary variables for instance dysplasia gynandromorphy (bisexuality), texture, pigmentation hair and hair distribution and so on

As in the studies of morphology the next problem at the more complex level of personality was to discover and define criteria for the dynamic components of temperament A scale for temperament was based on investigations of three correlated groups of traits Viscerotonia, the first component in its extreme manifestation is characterized by general relaxation love of comfort sociability and conviviality The motivational organization is dominated by the viscera, the functions of anabolism Somatotonia the second component is roughly a predominance of muscular activity and of vigorous bodily assertiveness The motivational organization seems dominated by the soma Action and power define life s primary purpose Cerebrotonia the third com

ponent is characterized by restraint inhibition physiological over response hyperattentionality and apprehensiveness Behavior seems dominated by the inhibitory and attentional functions of the cerebrum and the motivational forces appear to define an antithesis to both of the other extremes These components of temperament according to Sheldon appear to correlate with patterns of somatotype and like the morphological components they combine in various proportions in different individuals They behave within limits as independent variables As with the three morphological components the extreme variants are rare and most people combine in their temperaments various mixtures of these traits

The potential utility and the general implications of Sheldon s work seem promising In the component approach may lie the basis upon which the framework for a valid taxonomy of individual differences can be created One important aspect of Sheldon s work concerns the incompatibilities between morphology and manifest temperament which lead to failures of achievement and adjustment On the evidence of studies by Sheldon and co workers it seems possible that constitutional analyses can throw light on matters of achievement adjustment and delinquency Conflict may be the reflection of incompatible drives needs or motivations associated with dysplasia (uneven manifestation of components in the different regions of the body) and a dyspsychic pattern of the forces that impinge against one another Preliminary studies of delinquent juveniles mentioned by Sheldon indicated a distinctly higher gynandromorphy as well as other dysplasias in delinquent boys than in non delinquent boys of the same age On the side of motivational temperament the impression was gained that the delinquents have a driving somatotonia which is intermittent poorly sustained and complicated by a cerebrotonic characteristic which is generally strong enough to give the suggestion of furtiveness Sheldon also found the moderately gynandromorphic male confronted with a difficult sex problem It is apparently from the gynandromorphic groups that most of the peeping and sexually exhibitionistic males are recruited These personalities may have a singularly imperative sexual impulse In Sheldon s words there is a hair trigger characteristic about the sexual drive in these lower range gynandromorphs Such investigations which analyze constitutional incompatibilities as sources of behavior problems may contribute in more than one way to the understanding of certain psychopathic personalities Aggressive behavior for example re-examined in terms of the somatotonic component loses its vague

meaning and can be defined in form of relatively concrete criteria For the purposes of Sheldon s scale of temperament a trait that fails to define an antithesis to two of the polar components would be worthless Thus a trait such as extraversion' would not be satisfactory since there can be both viscerotonic (relaxed sociophilic) extraversion and somatotonic (aggressive dominating) extraversion Furthermore the traits would have to be defined in such a manner that their quantitative manifestations *would remain relatively constant and independent of cultural influences* Among the twenty traits listed under somatotonia are bodily readiness for action love of physical adventure lust for power love of risk and chance competitive aggressiveness psychological callousness ruthlessness and assertiveness and aggression under alcohol Overmanifestations of the somatotonic component somatorosis ' is associated with behavior patterns found in certain psychopathic personalities Sheldon s disturbing somatotonic personality is restless never still for long a reckless driver with a record of accidents love of dominating is his religion he seems to experience no particular emotion from killing animals he is considered pathologically aggressive under alcohol and so on Somatotonia frustrated even incompletely frustrated Sheldon believes becomes aggressive hate the most destructive element in human life

Sheldon s studies demonstrate conclusively that no single factor for instance the somatotype alone will suffice to explain a personality Persons of the same somatotype often develop into singularly different kinds of people On the other hand the relation between the morphological and temperamental levels of personality appears to be a closer one than has generally been supposed Sheldon s approach toward integrating psychological and somatic studies is one of the most comprehensive undertaken thus far It is the replacement of typologies with the component approach that is of great potential interest for psychiatric studies And furthermore from the viewpoint of individual analysis the disagreements or inconsistencies between physical and temperamental patterns are valuable in throwing light on motivation the nature of which may play a decisive part in the dysfunctioning of personality found in psychopathic personalities

Individual Variation and Sexual Behavior

The usage of perverse sexual behavior as a diagnostic criterion of psychopathic personality has long been one of the most confused

subjects The discrepancies between what the experienced physician and the sophisticated layman knew about sexual behavior and the classifications of normal and abnormal sexual conduct that pleased public opinion have always been obstacles to scientific concepts The failure of scientists to explore the realities of sexual behavior can be at least partly explained on grounds of society s attitudes in this field Psychoanalytical investigations of psychosexual aspects of personality removed many of the barriers and led to new formulations based on methodical clinical studies As knowledge on sexual behavior increased there was less inclination to stress the importance of perversions since certain perverse elements were found to be regular components in the sexual life of normals Nevertheless concepts of sexual adjustment remained dominated by behavioral categories that showed little understanding of the range of variation in human behavior Distinctions between normal and abnormal interfered with determination of facts Most investigations and theories lacked general validity because of two basic defects First not sufficient consideration was given to the relationship between individual sexual capacity and sexual behavior Secondly theories were based on observations of a small case material which was highly selective with regard to psychologic social and racial qualities

Kinsey s series of research studies of sexual behavior only partly reported thus far constitute a most significant contribution because of their broad orientation and thoroughness Kinsey speaks of the utility of a statistical sense referring to one s capacity to distinguish the specific from the universal and to recognize the difference between the phenomenon that is common and one that is rare He states Every scientist needs to cultivate his ability to distinguish between facts that are known to be true only for particular individuals and facts which are known in such variety for so many different kinds of individuals that they may be added up to an understanding of a whole population

We are not concerned here with an evaluation of Kinsey s work but with certain essential formulations on the subject of sex variants Kinsey comments Psychologic and psychiatric literature is loaded with terms which evaluate frequencies of sexual outlet But such designations as infantile frigid sexually under developed under active excessively active over developed over sexed hyper sexual or sexually over active and the attempts to recognize such states as nymphomania and satyriasis as discrete entities can in any objective analysis refer to nothing more than a position on a curve which is continuous Normal and abnormal

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the kind of sexual activity Animal contacts in rural communities may be substitutes for heterosexual relations and may be replaced by relations with human partners as soon as that is available The category sodomy loses its character of entity of sexual behavior if the city bred person becomes familiar with the facts of sex life in rural areas If an individual behaves in a generally irresponsible manner, showing no regard for the feelings of others, this will be apparent in all of his activities including his sexual conduct which should not be evaluated as an isolated field of activity The sexual behavior must be judged against the background of characterological trends instead of being classified on the basis of kind of activity This appears to be the lesson learned from recent investigations of individual variation of sexual behavior

Experiential Aspects of Individuality

Analysis as a scientific method forces us to isolate in the person certain aspects for purposes of study Individuality is thus split into many constituents which are not significant as separate parts but because of the manner in which they are integrated Any psychological state by the sole fact that it belongs to a person reflects the whole of a personality Functions, traits capacities and levels of consciousness cannot be considered as delineated units but must be looked at as complex organismal patterns We must not be tempted to look upon isolated aspects of personality which we have separated for reasons of methodology as autonomous structures or forces If we remain aware of the nature of individuality differentials and their role in the formation and fundamental function of the total personality then we shall not make the mistake of subscribing to generalizing behavior theories which disregard the uniqueness of the individual Theories that explain too little are often less harmful than theories that explain too much What is important in any assessment of personality function is clarity on matters of causation And here over emphasis on the extent of our knowledge is more dangerous than elaboration of the limits Many conventional ways of formulating interpretations of behavior are in many ways defective because they imply causality instead of interconnections Statements have been made to the effect that psychopathic behavior is due to *either* hereditary i e constitutional factors *or* is of psychogenetic nature We must see this confusing argument in its proper perspective The implication that we must choose between two alternatives purely physical causes and purely

one sometimes suspects, are terms which a particular author employs with reference to his own position on that curve The most significant thing about this curve is its continuity It is not symmetrical, with a particular portion of the population set off as 'normal," 'modal' typical or discretely different' And he asks 'Such a continuous and widely spread series raises a question as to whether the terms 'normal' and 'abnormal' belong in a scientific vocabulary Kinsey's data indicate that many items in human sexual behavior that are labeled abnormal or perverse in textbooks prove upon statistical examination to occur in as many as 30 or 60 or 75 per cent of certain populations It is difficult to maintain that such types of behavior are abnormal because they are rare Furthermore nearly the whole range of so called sexual abnormalities was found in the histories of socially and intellectually significant persons who were also the most successful socially and personally best adjusted persons contributing to the study, proving that it is unwarranted to believe that particular types of sexual behavior are always expressions of psychopathies Kinsey interprets these sexual activities as expressions of what is biologically basic in mammalian and anthropoid behavior and of deliberate disregard for social convention He arrives at the conclusion that there is little evidence of the existence of such a thing as innate perversity even among those individuals whose sexual activities society has been least inclined to accept'

Based on the histories of 5300 males Kinsey s conclusions carry enormous weight Whatever the validity of his sampling procedure and interview technique his first progress report from a case history study, which has been under way for nine years and the subsequent reports to come as the research project continues indicate the necessity for a revision of concepts on sexual behavior The sexual behavior of certain psychopathic personalities has been considered specifically different from that of the average person If one agrees with Kinsey that most sexual activities unscientifically classified as perversions or abnormalities are natural acts phylogenetically generally practiced according to individual variation of sexual capacity and orientation then it is not the kind of sexual behavior itself but the attitude of society which demands a classification of perversion This does not exclude however, that a 'natural act may be performed in an anomalous manner A homosexual with self-control and a sense of responsibility need not be psychopathic But certain homosexual prostitutes may show characterological abnormalities similar to those found in heterosexual prostitutes An act of sexual brutality may be abnormal because of the displayed brutality rather than

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it is incorrect to speak of environment as an entity with a specific meaning. It should perhaps more accurately be referred to as experienced environment. The relation of individual experience to environment indicates the relativity of its meaning. Alverdes pointed out that each species of animal selects from its surroundings what is biologically important for it and capable of being grasped by its sense organs. Only this is environment or the surrounding world for it. Relative environment may be markedly different for a dog, a bee, a fish. Our anthropocentric attitude makes us forget that what each man knows depends upon his own individual experience. In psychiatric work, for instance, *circumstances* and *events* are misleadingly equated with *experiences*. The available social history acquaints us with a multitude of data which inform us about incidents and social situations of a given personality. We do not derive from it the knowledge about the manner in which they were transformed into individual experiences. There is temptation, for example, to refer to a certain incident in a patient's life as traumatic, when in the patient's manner of experiencing the incident remained a triviality.

It is practical to distinguish between two modes of experiencing: (1) sudden experiences; these involve situations of danger or emergencies that lead to more or less instinctively determined reactions with only a minimum of individual differences, and ( ) the continuous experience of living. It is the latter kind which, if investigated further, may throw some light on the relationship of individuality and personality function.

The act of experiencing has been oversimplified as consisting of a sense perception which stimulates a thought which in turn promotes a reaction. The complexity of the experiential process can perhaps be better understood if we employ the aid of the reflex arch example. Sense perceptions in an analogous way manifest the afferent constituent of the arch. The medium of the personality is the center of the arch, where the incoming perceptive stimulus becomes assimilated and transformed according to the individual's pattern trends. The efferent part of this arch is the reaction which can be an act of behavior (a response observable by others) or remain silent as an inner attitude. The final disposition of the experiential material depends on its nature and acceptability. Psychoanalytical studies have demonstrated the mechanisms of suppression and repression which begin to operate if the experiential material is not acceptable. The role and magnitude of unconscious forces then depend on individual factors which govern the assimilative phase of the experiential process. Obviously the same perception, i.e., the same afferent stimulus, for example the witnessing of a crime, will

psychological causes means separation of mind and matter Psychogenesis, loosely used, postulates the existence of a sphere of personality that is independent of living matter A person is said to behave in a certain manner because of certain influences in his social environment His experiences are interpreted as the causes of his behavior Another person in the same situation, however, develops an entirely different attitude Accordingly the social situation in question may well be a significant interconnection in a chain of causation but cannot be the whole cause The chain of causation does not end there We must go farther and examine the manner in which the individual person experiences his environment The experiential process, however, cannot be separated from the perceptive functions of the organism and furthermore the nature of the individual experiences depends entirely on capacities of the individual organism Every individual experiences in his own unique manner We know only our own experiences but analogy leads us to believe that other persons have similar experiences This is an inference but not factual knowledge not even an observation

The subject of causality in the framework of this discussion constitutes a practical rather than doctrinal problem Unless we continuously re examine certain fundamental issues we are in danger of perpetuating fallacies that will interfere with the progress of psychiatric thinking The conventional separation of psychogenic and physiogenic aspects of personality is such a fallacy, it is obsolete and it precludes scientific formulations of functions and disturbances of the personality Preacceptance of misleading presentations of purely psychical causation, for example, may tempt us to ascribe to the person ideas and emotions that we consider, on the basis of our own experiences he should develop in response to a given situation Accordingly, we may create stereotypical cliches with respect to the relations of organism and environment

One way of avoiding such generalizations is to explore the factors which influence the individual manner of experiencing We may safely assume that it is one of the fundamental functions of the personality to experience Man's awareness and picture of the world depends on his capacity to experience Science has produced symbols for the understanding of things events of reality There are objective methods of checking sense perceptions On the other hand there are no tools for the objective recognition of the individual s coloration of his perception Perception as it appears is the *tool* rather than the *substance* of experience Since our knowledge of the world remains entirely subjective,

number of partners whereas the individual with the kinetic experiential pattern is more likely to qualify for the Don Juan role It seems worth while to point out that Don Juanism as prototype of sexual behavior has somewhat erroneously been explained as manifestation of a compulsion to prove oneself as a man Now it is one thing to have such a compulsion but another thing to be capable of compensating it in the Don Juan manner Such an interpretation ignores the perspective of the individual s total organization and offers in a purely rationalizing fashion one reason as though the needs of the organism had no part in motivation

Intensity The afferent stimulus described as the first phase of the experiential process can cause a great impact or just a small vibration That depends in an analogous vein on the resistance or fluidity of the medium upon which the stimulus acts In ordinary language one says he can take it—he has nerves of steel and regarding impressionability something made a strong impression or hardly touched him These comments gauge and express the variability of intensity which might spell the difference between a meaningless event and a life lasting experience

The impact of a disappointing love affair causes a severe earthquake in one person s inner world but only a passing shallow mood disturbance in another s So called sensitive individuals seem to register like seismographs what to others is far fetched or even unnoticeable Ignoring the relativity of reality people with polar intensities of experiencing will argue to the limit whether the one is imagining things and over sensitive or whether the other is just callous The intensity of experiencing determines the relative significance of live events The range of degrees of intensity has limits which vary among individuals The average person is adapted to his capacities and evaluates situations accordingly Some personalities however become aware of their inability ever to be aroused impressed or moved while others suffer from over responsiveness from what may be called lack of shock absorbers Of course a person can be badly placed The artist forced to work in a bank despairs about the lack of response he encounters among his fellow workers whom he will condemn as Babbitts An industrial efficiency-expert who finds himself in the company of Greenwich Village literates will hardly be aroused by the things that generate heat in the minds of his companions The limitations of experiential intensity in so far as they are pattern trends seem to play an important role with regard to the origin of attitudes of psychopathic personalities which will be discussed later

produce totally different acts of behavior or attitudes in the case of the various witnesses One will perhaps be furious and attempt actively to interfere a second person may remain stunned, stupefied, and may develop an anxiety state, and a third person, callous and in no way complicated by guilt capacity, may simply enjoy the show The manner of experiencing then is influenced by capacities that we must envisage as distinctive individuality differentials

Many aspects of psychopathic personalities can be understood better, if we consider three components of the experiential capacity (1) directedness (2) intensity, (3) quality

Directedness Experiential pattern trends indicate creative selective urges for the kind of experiences which satisfy the fundamental needs of the individual The idea of fate and destiny, so deeply imbedded in human thought originates in the realization of the persistence of a primary experiential initiative This persistence is not to be misconstrued as something leading to fixity or stereotypy of human attitudes It explains elementary trends solely, not contents of experiences In the man of the street language this was bound to happen to so and-so or 'that is the stuff he goes for Conversely the inability to understand certain trends is expressed with remarks like I don't know what he sees in that or what attracts him there Such wordings indicate recognition of the variability of orientations to life situations and convey awareness of the relativity of environment

The individual s total organization determines the experiential directedness An organism geared to speed and motor activity needs a kinetic experiential pattern The tendency is toward quick changes The actual kind and content of experiences depends on many personal social, and cultural factors We always see persons whose main need is physical activity They can be taxi drivers adventurers athletes traveling salesmen sailors or professional soldiers hunters roving reporters or many other things They dislike any sort of confining situation and crave experiences that permit them the active tempo for which they are built By contrast an organism that needs to conserve kinetic energy one for cerebral rather than physical activity, needs solitude The experiential directedness toward solitude is the general trend which can be met in many different ways Situations of solitude can be artistic-creativeness religious meditation intellectual pre-occupation social isolation perhaps merely dull passivity An affinity exists for situations that permit intensive rather than extensive experiencing Sexual activities regardless of preferences for one kind or another are restricted with regard to the

number of partners whereas the individual with the kinetic experiential pattern is more likely to qualify for the Don Juan role It seems worth while to point out that Don Juanism as prototype of sexual behavior has somewhat erroneously been 'explained as manifestation of a compulsion to prove oneself as a man Now *it is one thing to have such a* compulsion but another thing to be capable of compensating it in the Don Juan manner Such an interpretation ignores the perspective of the individual s total organization and offers in a purely rationalizing fashion one reason as though the needs of the organism had no part in motivation

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Quality If a painter, a geologist, and a real-estate agent look at the same landscape they are said to see 'with different eyes' Their experiential contents have different qualities which we can vaguely describe as aesthetic scientific and utilitarian Music is for some people an unpleasant noise for others the very essence of emotional life But we can go much further for differentiation We may think of a just finished concert given by a famous virtuoso The audience is electrified and enthusiastic Presumably all of the listeners are music lovers and have this quality in common Listening to their comments, we will hear such similar expressions as wonderful brilliant' 'poetic,' etc These words, which are merely symbols for communication, have their different individual meanings Music lovers may 'talk the same language,' but the experience of each one is unique and cannot be shared by others Or, for example designation for colors Persons with normal color perceptions will be in agreement on the finest details of shades But colors have vastly different emotional connotations for them Where one may speak of a 'cold blue someone else refers to it as 'soft and ethereal' The perception may be identical the quality of the experience totally different

Primary evaluations also defined as basic attitudes do not change under the influence of conditioning forces or rational inspection In a positive way this impresses us as the consistency of personality negatively we refer to it as the inability to profit from experiences which is said to be characteristic of psychopathic personalities Not to be overlooked is the fact that in reversed circumstances for instance in the case of a solid citizen forced to live among crooks, we think it quite normal if he maintains his own values and does not change them as the result of his new experiences Obviously the range of adaptability is limited by the boundaries of experiential properties If a person witnessing cruelty or practicing it does not experience that situation as being cruel' he cannot profit from any re educating approach, penal or therapeutic Like the color blind he is not aware of any inherent defect and accepts as normal the picture of the world to which he is adapted The basic experiential qualities cannot be investigated as isolated traits but must be seen in their relation to the total personality A person equipped to meet the demands of robust activities can experience as challenging and invigorating situations that the physically weak person experiences possibly as 'threat or danger

We have briefly elaborated the experiential capacity in terms of three fundamental components Some very essential features of the attitudes of psychopathic personalities cannot be properly evaluated unless one

studies the manner in which their experiential functions are characteristically altered. This being the case, the question of their social behavior can be understood better if we consider and assess in every given case the individual experiential capacity which shapes and influences the formation of the person's social values.

Psychopathic Disturbances of Personality Functions

In acknowledgment of individual variation and with the intention of avoiding typologies as well as classifications of behavioral categories we prefer to approach psychopathic personalities on the basis of three main modes of dysfunctioning which do not exclude each other but, on the contrary, co-exist though under variable circumstances. For this purpose, instead of attempting to describe specific psychopathic profiles—an attempt easily defeated by the lack of homogeneity of these personalities—we turn our attention on primary spheres of personality functioning, disturbances of which create the fundamental characteristics of psychopathic personalities. Clinical experience indicates that the basic modes of dysfunctions occur in the sphere of *affectivity, conation*, and *empathy*. The individual psychopathic personality may show manifestations of light, moderate, or severe dysfunctions in one, two, or all three spheres, and he may, according to the way in which one dysfunction seems more pronounced, resemble a certain type. Individual analysis, however, will disclose the manner in which each mode of dysfunctioning plays its part though in a given case the part of one or the other will be of greater significance.

1. *Dysfunctions in Affectivity*

Affectivity comprises the various emotions, feelings of pleasure and displeasure which the individual experiences. Fear, joy, grief, happiness, sadness, elation, to name but a few basic qualities, can be experienced in an endless variety of shades, mixtures, and degrees of intensity. In simple terms we refer to people as gay or serious, as optimists or pessimists and thus indicate a prevailing pattern of affectivity. Also observable are differences of evenness or fluctuations of moods, of tolerance to irritating influences, and of magnitude of emotional display. The prevailing mood imparts a specific coloring to the manner of experiencing

This is characteristically demonstrated by the following example Winston Churchill, who is a noted amateur painter, was asked to comment on the marked differences of a landscape, the 'actual scene as it looked to the camera and his finished painting of the scene shown in the color photographic picture Churchill compared his painting with the picture and explained I must say, I like *bright* colors

The prevailing mood by determining qualitative aspects of experiencing influences the attitudes an individual develops Evidently one who experiences the world in bright colors, whose emotional flow is even, and whose threshold to adverse influences is high is not likely to embrace pessimistic philosophies or to be hostile Cultural factors, training, education and the example of loved ones mold the person s ability to control and direct emotional display within the limits determined by basic personality functions The various molding influences do not fabricate the personality They are utilized to the extent to which they come within the range of individual adaptability Temper tantrums the urge to blow one s top, are not necessarily expressions of morbid anger or explosive affect more often than not they are attributable to the lack of self discipline plainly referred to as bad manners While it is true that certain groups or societies seem to be more emotional or stoic in their apparent attitudes it is also broadly true that the individual members differ with regard to their inherent patterns of affectivity

The relations between certain events and emotions for instance, fear of an impending danger or grief in case of death are obvious in as far as they are plausible However references to evoking' situations and to reactive states can be misleading Several factors should be considered in the evaluation of emotional responses First, the displayed emotions are not always identical with the feelings experienced Many persons in tribute to conventional attitudes feel that they ought to be sad or joyful or thankful and so on They then persuade themselves that those feelings, they believe expected under the circumstances are actually the feelings they experience The studies of various psychoanalysts have greatly contributed to the clinical recognition of conventionalized patterns in which the person represents himself to himself as well as to the others Secondly feelings may be pretended not because of an inner obligation but with the deliberate intention of deceiving people in order to make a desired impression Finally so called reactive states discount the principle of the individual experiential capacity and are apt to imply a kind of disindividualized causal relationship It is not the event that determines the reaction but the individual s manner of

experiencing that determines his attitude toward the event The prevailing mood influences the experiential process so that the same individual responds differently to the same kind of situation

To be reasonably consistent in one s attitude toward people toward issues and with regard to self evaluation one must experience with some measure of affective consistency The person who lacks this experiential continuity is bound to develop feelings of insecurity based on his growing realization of inner instability The effect of an over dose of mood variety is a disruptive one in as far as it seriously threatens and may even ruin an individual s social existence

The dependence of affective states on the general well being of the organism the changes during febrile states the influence of hormones drugs and alcohol are generally understood In contrast to such episodic alterations we have to consider the dysfunctions of affectivity which are characteristically manifested in the life patterns of certain individuals Many special terms denote the patterns of the prevailing moods the variability and the rhythm of changeability of disturbances of temperament For reasons of simplicity it appears practical to refer to these various patterns as modes of *dysaffectivity* (This term may seem incorrect because it has a Greek prefix and an English root The same applies however to dysfunction which is generally accepted and serves a most useful purpose)

Changes of affectivity are not one dimensional not up or down on a scale of mood patterns We can observe more than acceleration or retardation of psychic tempo in an individual who displays enthusiasm sociability and sprightliness on one day and aloofness and heaviness of mind the next Not only do affective fluctuations alter personality functions in one dimension in the sense of lifting or depressing mood but they determine total changes in all spheres among them the intellectual the social and the sexual Whether the manifestations are more obvious in one sphere of activity or another depends on the general make up of the individual In a sexually well endowed individual for example instability of sexual attitudes may become a major problem During periods of great drive and output of energy the sexual demand may be excessive In another individual sudden moods may interfere with intellectual work requiring detached attention and concentration The experiential aspect of repetitious sudden changes of mood may have an ominous cumulative effect on the person His self confidence may become increasingly undermined because rationalizations which previously

justified such mood episodes as reactions to external factors, have lost their plausibility "I guess it's just me," is then his final conclusion, which constitutes rational insight but is about as comforting as one's knowledge of having tuberculosis or heart disease Personalities with little or no capacity for insight may react with paranoid thinking Inability to hold positions or to cultivate friendships, or the awareness of being criticized because of instability can lead to the formation of projective ideas based on a feeling of injustice in an allegedly or actually antagonistic world We see numerous personalities who in face of failure or trouble due to their own lack of foresight and judgment become suspicious and jealous and are ever ready to take offense and blame either the persons in their environment or the structure of society as a whole for their inability to advance

The inner repercussions of dysaffectivity are far reaching and may distort the person's reality judgment If one conceives of reality judgment broadly it includes not only physical environment orientation in time and space and the ability to distinguish between logical and illogical thinking but it also covers orientation to people Judgment of people may be so strongly influenced by subjectivism that it lacks validity and applicability This happens if for the duration of a mood episode a person is confiding trusting, and too easily pleased but his evaluation of people changes as his state of mood changes He then questions or suspects the motives of the same people Nihilistic thoughts may dominate his thinking and undermine his ability to maintain balanced opinions His reality judgment consequently has no objective stature

Since affective fluctuations are not only of the crescendo decrescendo variety but also change abruptly we have personalities who are impulsive and explosive The affective change occurs and is experienced with extreme intensity We hear such statements as "I suddenly saw red" or "a feeling hit me" which describe the abruptness of the experiential change What happens then depends also on other individual characteristics An aggressively inclined person may become assaultive, even dangerously violent Some irritable personalities react in a very agitated manner which may develop into attacks of rage During such attacks awareness of the surroundings is practically non existent and the person seems to be in a temporary state of altered consciousness Inhibitions are suspended as a result of which acts of blind violence may take place The direction of such explosive reactions can be aimless or justified One would for instance hardly compare the rages of Beethoven throw

ing chairs at servants interrupting him at work with a sailor going to town on shore leave The individual in a state of heightened irritation is annoyed by everything and consequently conducts himself in a fashion that facilitates arguments and conflicts That is why what begins as an affective disturbance ends by becoming a diffusely chaotic state of mind which interferes with all the social functions The negative impression that uncontrollable temper makes on others creates feelings of inadequacy and breeds resentment which in turn enhances irritability A special tendency to explosive outbursts can remain latent for long periods of time and become manifest only in certain situations perhaps when a person is compelled to suppress the free expression of his feelings or in case of incompatability of personalities who must live together It then may happen that the same person makes a fundamentally different impression on those who know him well and on others who only meet him under favorable conditions

More introspective personalities experience sudden mood changes as ecstatic or exuberant states or as spells of dramatic despair and painful dejection Self pity may be pronounced Religious moods expansive ideas and creative moments of phantasy occur but fade away because they lack intellectual substance and depend solely on exaggerated affective phases Special reference must be made to the so called *epileptoid character* The constituents of this character are somewhat vague and include primarily irritability bursts of temper explosiveness and sudden moods but also egocentricity sensitiveness religiosity and litigiousness More than twenty years ago Schneider stated There is no epileptoid psychopath only a psychopath who is suspicious of having epilepsy This may seem too dogmatic today in the light of electroencephalographic studies which have established abnormal tracings in persons without clinical evidence of epilepsy but showing patterns of affective dysfunctions Yet the situation is not at all of the *either* functional *or* organic variety since it remains uncertain whether epilepsy and cerebral dysrhythmia are identical Relatives of epileptics show a higher incidence of abnormal tracings but are not necessarily epileptoid personalities It is also an established fact that some individuals with recurrent epileptic seizures do not show cerebral dysrhythmia between seizures and even extreme abnormalities in the electroencephalogram may not be associated with clinical disorders The complexity and variety of individuality differentials must produce gradations and variability of manifestations which cannot be forced into two opposing classes one demonstrably epileptic one not From the clinical viewpoint it seems better

to correlate the epileptoid character with personalities who show tangible epileptic phenomena rather than classify a person epileptoid who has no manifestations of epilepsy.

There are other modes of dysaffectivity which are not manifested in exaggerated fluctuations of moods but in the prevalence of a mood pattern. Some personalities are in a continuous state of uneconomical vivacity and extravagance while others display sulky gloominess and incapacity for enjoyment. An organism geared to speed and motor activity needs a kinetic experiential pattern. Depending on harmonious integration of function such personalities are quick, enterprising, daring, untiring, imaginative and capable of intensive application to work and business. A fast moving car without proper steering mechanism swerves and runs off the road. In an analogous way experiential extensiveness without appropriate intensity precludes formation of constructive attitudes. Superficiality, shallowness, recklessness, and irresponsibility are common properties of personalities unable to experience anything as an obstacle or as being improper or forbidding. Because of their constant optimism and their ability to impress people, and especially if they have, as they often do, great personal charm, they make ideal candidates for imposters. Adventurous careers, risks taken without calculation of liabilities, failures which are not taken too seriously, epitomize the life stories of such personalities. If they are of social prominence their names are found in headlines of tabloid papers which exploit their extravagances and scandals. Educational neglect tends to enhance such attitudes whose representatives easily find happy hunting grounds in certain fields of high-pitched activities of our civilization. In social life their contacts are numerous but without duration. Intellectual and aesthetic interests change rapidly and conversions to new doctrines are quite frequent. The very idea of systematic or methodic approaches is foreign to such individuals to whom improvisation and 'headline thinking' are more natural. They have a flair for flashy social life, for gambling, for show business, for 'wild parties' and for any kind of activity that entails excitement and noisiness. Some are 'good sports' going along in search of fun and variety. However, their uneconomical vivacity does not provide the soil for solidity in human relations, business, occupational activities or intellectual orientation. Many find themselves involved in dubious affairs before they realize how or why. This is usually owing to their over confidence and inability to think in terms of pro and contra. Furthermore there is the tendency to exaggeration and lying. Swindling does not originate from maliciousness or shrewd calculation but from

in active phantasy a desire to appear big and important and the need to cover up failures There are all sorts of swindlers and they can only be differentiated on grounds of motivating factors It is always incorrect to refer to the swindling of the psychopath Analysis of the motivating factors reveals a wide variety of aspects If they are brought in relation to basic dysfunctions certain cardinal features begin to emerge With regard to the affective dysfunctions now under consideration swindling seems to be rather a by product of fast and expansive mental activity than calculated deceit Some of these individuals appear nevertheless charming because of their contagious gayness in spite of independability and irresponsibility they cause no real ill feelings and they are often tolerated no matter how reckless or quixotic their behavior

Another mode of dysaffectivity is manifested in prevailingly gloomy moods We find downheartedness pessimism vague anxieties lack of self confidence and psycho kinetic sluggishness among the most frequent variations of this mood pattern In contrast to the exaggerated depressed states which develop into psychoses there is no tendency to severe self condemnation or suicidal thoughts The manner of experiencing is rather continuously confined to the darker colors Reality evaluation is consequently adapted to this particular affectivity and the thus determined attitudes tend toward doubt pessimism and bitterness The valuing functions are strongly influenced by the prevailing affectivity and even philosophical doctrines—often approached solely in terms of universal validity on the ground that science is impersonal—are creations of personalities whose affective characteristics must be assessed as well as their intellectual ability In the absence of episodic mood changes which would bring about an alteration of outlook and attitude such individuals are unable to recognize the mood conditioned basis of their negative orientation to life Depending on intellectual faculties as well as on the severity of the mode of dysaffectivity some persons may seem morose and sullen others gloomy and dull again others because of an admixture of aggressivity misanthropic cynical and sarcastic Some are sad sack figures unpopular to the point of isolation Because they lack a sense of humor and see mostly the negative aspect of things they arouse antagonism Sexual frustration can become a serious problem since such persons may find it very hard to interest and fascinate partners Among the most maladapted not infrequently substitutive practices ranging from intensive masturbation to exhibitionism intercourse with minors or sodomy are found Lack of drive and limited imaginativeness become obstacles to social advancement The

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than the dissolving of repressions and inhibitions Or, to put it differently that many alcoholic individuals are not trying to get away from inner difficulties but to get into' a more pleasant state of affectivity This differentiation is essential in view of the fact that certain concepts of alcoholism have stressed the self destructive quasi suicidal behavior of the individual who ruins first his social existence and finally his physical health The ingestion of alcohol as a mood medicine however does not necessarily imply an unconscious desire for its concurrent toxic effects especially since most individuals resort to alcohol because of its availability rather than in preference to drugs they cannot secure In theory at least it seems possible that not a few addicts would prefer a totally harmless drug which would improve their state of functioning without endangering their abilities or social prestige

There has it seems in recent years been more attention devoted to the neurotic patterns in relation to addiction than to the individual whose addiction is fundamentally actuated by affective dysfunctions This is perhaps in part due to the fact that many regard the inner problems of a patient as *causative* of his addiction when in reality they are *indicative* of his emotional situation One may well remember E Bleuler's statement that what we call psychogenic is mostly thymogenic

A similar relationship exists between certain sleep disturbances and drug addiction That correlations exist between the varieties of temperament and sleep patterns has been common knowledge through the ages The studies of Sheldon have produced certain criteria to take the place of the more impressionistic evaluations He associates specific trends with the fundamental components Whether his preliminary findings can be substantiated by further clinical investigations remains to be seen Cerebrotonic people it seems are peculiarly recalcitrant in the matter of sleep The cerebrotonic is a light sleeper and his habits of going to sleep are irregular and erratic On the practical side a person of such characteristics cannot be considered to suffer from disturbances of the sleeping mechanism If he is called insomnious in the clinical sense and treated with drugs he may develop drug dependency since his physiologically determined sleep pattern will persist One obviously cannot determine what constitutes insomnia as a phenomenon of impairment of sleeping mechanism on the assumption that eight hours of sound sleep during the conventional hours of the nocturnal period represent the invariable physiological requirement

There are however sleep disturbances that are basically symptoms

display of sulky pessimism and the grumbling dissatisfaction with the world often develop into hostile attitudes quite different from the melancholic characteristics of personalities of the cycloid variety

Drug Addiction and Alcoholism The ameliorative effect of chemotherapy on painful moods has been known throughout the ages Alcoholic beverages hypnotic sedative and narcotic drugs as well as stimulants are widely used in all spheres of societies in many cultures with varying degrees of social sanction

From the very outset it must be clear that there are many compelling and facilitating factors which play a major role in the development of alcoholism and drug addiction Among them are important aspects of cultural orientation and social customs The magnitude of alcoholism for instance varies considerably among societies Many of the involved factors belong into other chapters of psychopathology, especially the psychoneuroses We are here not concerned with addicts who are motivated by conflicts conscious or unconscious but rather with the relation of modes of dysaffectivity to habit formation The criterion as it applies here is primarily the desired alterative effect on the mood situation

This is well demonstrated in the popular consumption of benzedrine and related drugs The general effects are stimulation of mental activity and mood changes in the direction of euphoria and greater self confidence Certain observations seem to indicate that the effects vary greatly according to the particular affectivity of the individual Persons for example, who have no subjective affective disturbances and take the drug for treatment of obesity often state that they notice no psychological effects at all except diminishing appetite On the other hand persons whose mood patterns are characterized by instability and moodiness experience euphoria While no reliable figures are available on the extent of the consumption evidence from various sources of information points toward great popularity Penal institutions for example report a steadily increasing illegal trade Vagabonds tell of sales on the road and on park benches The benzedrine habits of artists and intellectuals are openly discussed and described in biographical sketches in journals and magazines It seems quite interesting that many alcoholics claim the new dope compares favorably with alcohol They see the advantage in the immediate effectiveness the pleasing feeling of energy and cheerfulness and the absence of hangovers and serious ill feelings This brings up the immensely important question of whether a significant number of alcoholics are primarily craving a euphoric state rather

drugs often increases the resistance to ordinary doses which is due to both greater tolerance and mounting pessimism Therapeutic management of these cases is as difficult as it is challenging It must be aimed at regulation of the impaired sleep mechanism as well as at the emotional re orientation of the patient

The dysfunctions in affectivity as briefly outlined are represented in various modes and degrees of severity in the individual psychopathic personality L Bleuler felt that the affective peculiarities are in the foreground in most cases and he went so far as to state that the so called psychopaths are really nearly all exclusively or mainly thymopaths This overemphasis on the disturbances of affectivity seems to go too far since other spheres of personality functioning are fundamentally affected It is nevertheless important to realize that affectivity influences the basic attitudes of the individual since it imparts a specific coloring to his manner of experiencing

- *Dysfunctions in Conation*

Conation manifests itself as the motivational force that directs and impells the strivings and efforts of the individual It represents the purposive activities of the personality The principle of motivation of human activity toward a goal has been a matter of speculation whenever and wherever the searching intellect of man explored the sources of life vitality and energy Involved in this matter is the problem of the free will of will power of divine direction and the soul which perhaps for the first time in terms of modern psychology was radically re evaluated by the philosopher Schopenhauer He saw the intellect as the creature of the will as its instrument destined solely for its service Will in the meaning of this philosophy is the dynamic over all force which constitutes the primary principle of being the source of all phenomena the basis of the continuity of life itself Will is the inner urge that determines the individual s strivings but it is an unvaluating life urge is causeless and unmotivated Intellect being the tool of the will provides moral motivations which are but rationalizations of the instincts We have here the basic insight of modern psychology that a man does not want a thing because it is good but finds it good because he wants it What Schopenhauer called the will is in many ways identical with what was later designated as instincts impulses libido or the id

of modes of dysaffectivity They are indeed particular aspects of disturbances of affectivity Absence of sleepiness, broken sleep, and restlessness during the hours of the night are common during episodic or protracted phases of mood disturbances Nights become torturous There is mounting apprehension and irritability Fear of tormenting hours of sleeplessness leads to fatalistic anticipation of inability to fall asleep and the individual thus becomes involved in a vicious cycle of disturbances It is often an academic question whether such a person cannot sleep because of his anxiety or feels anxiety because he cannot sleep A craving for drugs or alcohol develops in these instances not on the basis of so-called escape mechanisms but because of the person's need for rest physiologically necessary for the maintenance of proper personality functioning

What is important from the clinical and therapeutic viewpoint is the recognition that there are psychopathic personalities in which the deeply imbedded sleep dysfunctions constitute the fundamental disturbance out of which develop as secondary manifestations drug dependence as well as various modes of abnormal behavior Some become involved in illegal and submissive practices in order to secure drugs Some dread going to bed to the point where they stay away from home and hang around in saloons or cafes there they become acquainted and mixed up with doubtful characters as a result of which they sooner or later find themselves in trouble If one sees such persons in the later stages the secondary characteristics which are due to the cumulative effects of addiction and social deterioration are quite prominent Also the fear of tormenting hours of sleeplessness has become a major issue in their thinking and has developed into what Myerson called 'anticipation neurosis He comments Suppose that a man finds that his nights have become tortuous through insomnia then gradually or suddenly he fears the night time and he builds up an anticipation neurosis concerning his sleep He goes to bed licked in advance" and no matter what drug he takes at this time it is usually ineffective in producing refreshing and restful sleep In certain cases the severity of the addiction problem seems to depend on the severity of the affective dysfunctioning It is mostly the individual with prevailingly gloomy moods who suffers from persistent sleep disturbances The use of alcohol or drugs begins legitimately enough because of a sensed necessity for the maintenance of the person's equilibrium but it soon becomes a preventive habit regardless of the situation of the moment As is well known the prolonged use of

unable to concentrate in school and fail to adjust in spite of good potentialities in other spheres of the personality. Emotional and behavior disturbances develop on a secondary basis partly in reaction to their failures, partly because of their inability to adhere to strict routine or discipline at home or in school.

The significance of these psychological studies lies in the fact that they single out specific areas of dysfunctioning. In the light of these psychometric patterns the psychopathic individual emerges as a person whose intelligence, orientation to reality, and capacity for conceptual thinking is *not* impaired, whereas his ability to apply himself with perseverance and sustained interest is deficient. His social maladjustment is conditioned by these inherent dysfunctions which are part of his personality organization. Furthermore these test patterns distinguish the psychopath from the schizoid individual whose orientation to reality is impaired, and from the encephalitic whose patterns show additional impairment of functions. These motivational deficiencies moreover are not part of the patterns of neurotic individuals but are indications of specific dysfunctions of psychopaths. Further analysis of psychopathic behavior will bring out that these test results correspond with psychiatric studies of the psychopathic personality.

If we examine how the experiential capacity of psychopathic personalities is adapted to their conative patterns, we find almost universally feelings of unrest, of boredom and frustration in situations that call for concentrated endeavor. We often find an emotional vacuum, a feeling of emptiness which promotes a repetitious desire for a change, for new scenery, new people or something exciting. Because of the inner unrest they become ever so often "fed up" and leave place after place in disgust. There is a remarkable lack of experiential intensity in their manner of experiencing. Experiences do not easily crystallize into lasting impressions as they do with people who believe that a particular event or the precept of an admired person inspired them to life-lasting strivings. Psychopaths are forever struggling with the phenomenon of evaporating enthusiasm. They may be strongly impressed with an idea, make heroic decisions or plan great projects. But while enthusiasm runs high for new situations, jobs or people, it soon dissolves and nothing is left to drive them toward their goals. In a way, such a personality can be compared to a car that is capable of a quick start and speed but useless for touring. It is the psychopath's eternal dilemma to lack the sustained output of energy required for even a mediocre social career.

effort and to apply themselves with tenacity to their purposes. We may safely postulate that intelligence, talent, and imaginativeness remain mere potentialities without the forces of conative support and drive. This is precisely the case with many 'once promising' people who in the judgment of the man in the street 'got nowhere' because of lack of will power and weak characters.

If the forces that direct and impel effort are strong we find in many instances personalities whose duty consciousness, attention to detail, and efficiency are frequently called 'perfectionism' with a connotation of compulsive behavior. It can be misleading to appraise as compulsive what is fundamentally a healthy mode of conation. If orderliness, cleanliness, and a certain rigidity of habits are attributed to compulsions, we must on this descriptive level diagnose cats, for example, as compulsive characters. A cat, as compared with a pig, devotes endless hours to cleaning. It disposes of excreta in a most meticulous fashion and seems so addicted to routine that it will stick to familiar places even after they are no longer inhabited and food providing. A distinction must be made between what may be called the compelling forces within the personality, which condition its cohesiveness (centripetal forces in an analogous sense) and compulsive tendencies which are pathological objectively as well as subjectively since they are experienced as disturbing concessions to obsessive ideas. It is important to recognize the relation of strong conative endowment to the cohesiveness of the personality, manifested by stability, orderliness and a natural sense of responsibility and discipline. These characteristics represent the antithesis to the general picture of psychopathic drifting, instability, and getting into troubles.

Psychopathic personalities show evidence of specific dysfunctions which manifest themselves as inabilities to sustain effort, endure routine or work methodically. Clinical psychologists have made significant contributions to the study and recognition of the underlying disturbances. Psychometric patterns reveal 'low motivational scores' in psychopathic personalities believed to be pathognomic. The 'motivity score' which tests volition, drive and perseverance will be low, while scores of all tests which pertain to intelligence, reality judgment, and other main areas of personality functioning are likely to be average or superior. This defect in personality organization can be demonstrated as early as infancy. In later childhood there may be additional signs of dyskinesia and lack of language mastery. These children are restless

unable to concentrate in school and fail to adjust in spite of good potentialities in other spheres of the personality. Emotional and behavior disturbances develop on a secondary basis partly in reaction to their failures, partly because of their inability to adhere to strict routine or discipline at home or in school.

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The individual psychopath rationalizes his failures in many ways Some remain convinced of their abilities and display arrogance and conceit They feel sure that they can manage jobs, people, and, last no least regulate their own lives Confronted with failures, they find fault with people institutions society Others react with anxiety to situations that demonstrate the discrepancy between planned performance and inadequate fulfillment This applies especially if there is unusual and heavy environmental pressure from which they cannot free themselves In the military service, for instance, many psychopaths, and mostly for the first time in their lives, find themselves forced to adhere to strict rules of discipline and cannot walk out or 'quit' This leads to irritability impulsive behavior, and irresponsible conduct Psychopaths who are used to fighting against controls wherever they are encountered at home in school and at work, find in the military service a kind of society in which controls are much more extensive than in civilian life Yet there are some psychopaths who in spite of their dislike of regimentation become professional sailors and soldiers This happens partly because they have tried everything else and have failed, or because it appeals to them to get around and see the world Also, in the military life they feel excused from responsibilities toward the home and can live for the moment As a rule these psychopaths do poorly and soon get into trouble There are instances, however where the motivational deficiencies are mild enough to become compensated when the person does not have to make his own decisions or set his goals and can avoid boredom as long as he moves from port to port or from one outfit to the next In this manner some psychopaths do well in the military service and have no real adjustment problems until the time comes when they again have to face civilian life

Distinction should be made between instability due to dysaffectivity and instability caused by dysfunction in conation While both are instrumental forces in the same person and are often so co ordinated that they influence behavior in a manner which cannot be discussed separately there are modes of instability that are primarily the outcome of motivational deficiences In contrast to mood conditioned instability which shows a rhythmical element and may be associated with periods of excellent performances motivational dysfunctions are of a permanent nature and basically independent of affective influence The psychopath whose main difficulty lies in the sphere of conation may show little evidence of emotional disturbances What he experiences as getting bored and growing restless is primarily a manifestation of the

manner in which he adapts himself to his inherent lack of perseverance

The social career of psychopaths with predominance of conative dysfunctioning depends of course not only on the severity of the disturbance but on many other personality features Those who are persuasive urbane and polished personalities show often a remarkable talent for extensive careers Since they may make an excellent impression on even sophisticated people they talk themselves into positions confidences and marriages Some reach influential positions but cannot last The false front collapses either because of the display of inefficiency or the discovery of irregularities Sooner or later vocational and social instability becomes a matter of public record forcing the psychopath to move on and look for new hunting grounds elsewhere

The less spectacular psychopaths are in and out of work and try one kind of job after another Many of them have a convincing way of pleading for just another chance This granted the result is invariably the same first vanishing interest then irregularity of attendance to duties finally quitting or being fired Quitting becomes the most frequently used item in their vocabulary Their defensive explanations are honest in terms of their valuations Social incentives do not have for them the inner meaning they hold for people capable of greater effort and endurance For this reason psychopaths are at least in principle not guilty of negligence laziness or lack of will power

Psychopaths with artistic talent or creative ability often start out with a promising piece of work which may show elements of brilliancy but the work of the artist or writer requires hard labor as well as inspiration and talent and moreover depth of perception as well as the emotional intuition for the feelings of others The inner instability of the psychopath cannot provide the soil for truly creative work After short lived periods of notoriety if even that was achieved they tend to turn into self styled bohemians who live from one day to the next in never wavering expectation of becoming great tomorrow When and if ever frustration begins to hurt they are prone to embrace ideologies that exonerate their self valuation and to blame the structure of society

The world of entertainment sex race tracks and resorts especially holds a specific affinity for many psychopathic personalities There is excitement the coming and going of people and variety Furthermore there are all kinds of rackets that promise easy money Psychopaths aggregate in these places for many reasons In a general sense they are ideal hunting grounds for those who cannot adapt themselves to more

regular modes of social existence The 'seasonal' character of resorts provides an atmosphere of living for the immediacy of the moment Just what particular place the psychopath finds in this milieu depends on his calibre He may be croupier or entertainer bell boy or dish washer As the season comes to an end, he moves on and tours the country from coast to coast and state to state

Some become tramps and vagabonds Distinction must be made between psychopathic drifters who become tramps and the schizoid wanderers As far as the social career is concerned both groups show similarities Yet the conditioning factors are vastly different The schizoid individual whether a dullard with marked emotional lameness or a dereistic eccentric moves away offensively from people and as a vagabond often lives like an ascetic with leanings toward the metaphysical and religious or social reform His fundamental disturbance is in the sphere of orientation to reality The psychopathic drifter has no basic difficulty in attaching himself to people or practical things, but he cannot expand his interests into constructive lasting investments He is mostly alert and spontaneous and he can be quite sociable The schizoid wanderer may be motivationally well endowed His autistic thinking merely creates peculiar goals toward which he strives By contrast the psychopathic drifter has no goal His restlessness is his lack of perseverance

That many psychopathic drifters become involved with the law that many others turn into alcoholics or become prostitutes is fundamentally conditioned by their motivational deficiencies which do not provide the basis for more solid social careers It must be kept in mind of course that many other factors enter into motivation and that interpretations must always see the individual in his social situation However appraisal of conation in psychopathic personalities indicates that dysfunctions while not always predominating are never insignificant in magnitude

3 *Dysfunctions in Empathy*

The functions of empathy constitute the basic elements in human relationships Empathy signifies the capacity for 'feeling into' in the sense of projecting one s own consciousness into another being The immense importance of empathy for goodness or badness of the human being is expressed in Spinoza s famous dictum Benevolentia nihil aliud est, quam cupiditas ex commiseratione orta (Goodness is nothing else

but love born of compassion for the pains of others) It must be understood from the outset that feeling into does not refer to detached objective comprehension of other person s feelings but rather implies warm emotional participation Empathic experiencing represents a valuing function As such based on the emotional intuition for the pain of others it creates awareness of altruistic obligations It is the prerequisite for love and friendship for the promotion of individual efforts in the interest of the social group Without empathic function there would be absolute prepossession with the self and complete disregard for the interests and feelings of every one else Moreover the empathic function may be extended to a wide variety of things and is not confined to people For this reason we are not dealing solely with a process of inner identification but with complex experiential capacities Empathic feeling may be for flowers animals or any prized possession Famous poems and songs devoted to life and death of a flower man talking to his horse or dog the story of Pygmalion who fell in love with a statue are examples of empathy The sensitive aesthetic personality shows a highly differentiated empathic capacity

Educability depends in essential aspect on the student s empathic endowment without which the teaching of social values duties and religion can at best be superficially accepted but hardly be assimilated Cultural emphasis on manifestations of empathy varies widely from one society to another In a Spartan or absolutistic culture universalized empathy will be condemned as weakness or treason Christian theology glorifies it and demands its cultivation for the benefits of all the creatures of God Individuals in any kind of society differ in their ability to adhere to rigid standards according to which they must either suppress or activate empathic manifestations There exists great individual variation with respect to empathic endowment Certain institutions in any society require personalities who are not too acutely handicapped by empathic feeling capacity The leader of a military organization the business executive a prosecuting attorney or an executioner must be men who can exercise their duties without inner preoccupation with the effects of their activities on the feelings of their subjects To make decisions that mean life or death for others or to dismiss loyal long time employees for reasons of business economy necessitates a certain aggressiveness and insensitiveness In exaggeration such characteristics present the antithesis to empathic feeling

Powerful ideas ideals that sanction actions as means to an end varied group philosophies prejudices and political dogmas shift the

empathic directedness from individuals to religious or political bodies For instance, we speak of 'life' or health' of the nation for which we are willing to sacrifice our lives as we would for a loved person The laws and beliefs of a given society prescribe in many ways the object choice for empathic feelings outside which any demonstration of em pathy becomes controversial, illegal, or ridiculous The Spartan custom of abandoning ill-developed children or the Nazi-treatment of minorities precluded empathy with regard to these victims In religious wars the very principle of love was turned into a holy obligation to kill and tor ture The passionate animal lover who rigorously fights for abolition of vivisection or hunting risks being called a sentimentalist or a nuisance

The fundamental biological principle of the empathic function per tains to social adaptiveness without which there would be no group survival Complete absence of empathy would mean complete severance from human relationships The formation of an individual s conscience and his orientation to social values depends in many aspects on his capacity for empathic experiencing Here lies the significance of em pathy as a major valuing function With low empathic endowment there is in many personalities correspondingly low capacity for conflict A person incapable of feeling himself into the inner world of others cannot but consider only his own feelings When we appraise certain selfish or anti-social attitudes we must do so in terms of individual aspects of experiencing and find out how such attitudes are related to functioning or dysfunctioning in the sphere of empathy We are not concerned with persons whose mentalities are impaired because of major disorders but with human beings who seem to lack awareness of good and bad of right and wrong The concept of 'moral deficiency' which has so often been applied in connection with such persons is unfortunate in that it postulates 'moral forces as basic human characteristics and envisages 'ethos as some sort of normal trait' But all definitions of what consti tutes ethos or moral forces are contingent upon the codes and mores of a given society and do not apply to the biological laws of personality functioning It appears consequently more appropriate to examine the specific functions that enable or prevent an individual from adapting himself to socialized behavior and here empathy emerges as a deter- mining force

Much of the symptomatology of cold egoism emotional callousness, and aggressive violence of the rights of others, characteristic of psycho pathic personalities arises in relation to dysfunctions in empathy Kahn epitomizes 'The psychopath sails under his own flag like a pirate, he

does not care about ship or crew except as they contribute to his own goal This particular aspect of psychopathic behavior is perhaps the most universally recognized criterion It represents the most disturbing element since it always involves or hurts another person if not society generally In contrast to the other dysfunctions which in many ways were more harmful to the psychopath than the group dysfunctions in empathy always concern others and do not manifest themselves as subjective disturbances either openly or disguised One is tempted to declare that lack of capacity for empathic experiencing puts the psychopath in the position of a stranger who does not speak or understand the language No matter how well he observes, imitates or pretends he does not understand the language of the tender mind Many psychopaths are pleasant enough and friendly in their own ways but they will invariably hurt those who depend on them for love or security They may hurt unknowingly since they do not have the emotional intuition for the feelings of those around them Borrowing money for gambling or fancy purposes making all sorts of meaningless promises and stealing or lying to gain immediate advantages are the stock in trade of the assault upon the family

While we must keep in mind that empathy depends on maturation and all the situational factors that influence emotional growth we must also realize that the primary initiative for attitudes is inherently determined and that as Gesell puts it training does not transcend maturation The first behavior disturbances emerge quite early in childhood These children are disobedient unmanageable and disrespectful and most significant show no signs of guilt As early as kindergarten the psychopathic child may prove to be a disruptive element and acquire the reputation of a bad child Tender care domestic security and understanding parents have no more influence than admonition and punishment In many cases even the most painstaking inquiry into the domestic scene and its psychological milieu fails to unearth evidence of plausible provocative factors In many other instances there is parental disharmony and poor supervision yet other children in the same milieu develop normally and do well in school and later on in life The psychopathic child runs away from home stays out late and lies even if there is no fear of punishment involved Parents often do not punish at first They ask advice and consult child guidance clinics family physicians and school or church authorities Later in despair they try severe punishment but with equally discouraging results In school and in the neighborhood these children become problem children' because of disobedi

ence, truancy and vulgar sexual activities Of course there are degrees of intensity varying from abnormal lack of discipline to aggressive delinquent behavior Aggressiveness is not always an outstanding characteristic Some psychopathic juveniles are unmanageable at home but are at least outwardly controlled in the neighborhood and in school They nevertheless show disregard for the feelings of others and are often cruel to animals and human beings, cold in their response to gestures of warmth and love In contrast to schizoid juveniles who are withdrawn often peculiar, and characteristically hostile, psychopaths are inclined to seek company, to spend money freely, to gamble, and to acquaint themselves with the coarse realities of sex One does not find any indication of guilt feelings or desire for confession or atonement

Lack of empathic feeling is not necessarily associated with frank modes of disturbing behavior Generally it manifests itself as a bold matter-of-fact attitude without emotional dependence on people Satisfactions are derived in the most crude and direct fashion, and principles of loyalty faithfulness, substitution or sublimation have no part in the psychopath s scheme of things They 'take but do not 'give' They greatly admire the kind of 'on the level' realism which dispenses with verbal and conceptual niceties and assures them clearly their profit and pleasure In matters of sexuality there is no problem of emotional sharing or obligation involved Sexual intercourse is a matter-of-fact business for the purpose of immediate satisfaction and pleasure In spite of the insensitivity to the subtler needs and demands of other persons and in spite of frequently overbearing callousness such psychopathic individuals are often quite popular and surprisingly in demand sexually Their desire to subdue and dominate may be strongly developed There is nothing inhibited in these personalities and their very ruthlessness paves the way for gang leadership The popular fascination with such characters has been commercially exploited to the point where we have today a strange preoccupation with psychopathic portrayals on stage screen radio in newspapers and books Psychopathic behavior is actually idealized though in the case of the criminal he loses his game the very last minute in tribute to the childish formula 'crime does not pay The harmful effect of such presentations lies in the fact that the criminal becomes the hero, the smart guy and that in this way an impression of manliness and superiority is created which may not be intended Many psychiatrists have speculated on the conditioning effect of this kind of propaganda on juveniles and especially its relation to juvenile delinquency

Psychopaths have a genuine talent for again and again involving themselves in difficulties and troubles They acquire a reputation of insincerity and shallowness because their promises prove to be meaningless It is perhaps more than anything else the inherent lack of development of social feelings that forces the psychopath to enact emotional situations in order to make a desired impression on people on whom he depends materially His regardlessness manifests itself in all social relations whether sexual or within the family or community Much damage comes from miscalculation of psychopathic tendencies as in the cases of men or women who marry in fits of pseudo idealism speculating that by virtue of their own pure characters they can successfully convert a notorious gentleman or in some instances a prostitute Such persons soon have to adapt themselves to a life of irregularity and hardship since the conversion fails to work There are many transgression that are viewed more seriously by the family than by the law since they remain within legal limits Bills must be paid continually objectionable companions have to be tolerated or blackmail situations may have to be met A psychopathic husband or wife may disappear from home periodically or for good to have fun to escape from a threatening discovery or just to escape the pressure of family responsibilities Family savings or valuables may go along When confronted with the fact that the money taken and wasted was needed for some urgent purpose such as the sickness of a child a psychopath is likely to dramatically regret his action and make excuses but as he remains unable to feel himself into the minds of those whose feelings he has wounded he experiences no real guilt or conflict

On Criminality The vast territory of crime and delinquency cannot be approached on the basis of one science such as jurisprudence sociology or psychiatry In so far as psychiatry is concerned not all aspects of criminality involve characterological issues Much depends on the particular circumstances under which criminal acts are committed and there is often the dilemma of public approval versus legal condemnation In a given case the motive of the delinquent may be plausible to the point of justification Euthanasia for example though legally a crime will not be associated with a criminal character Distinctions will be made between personalities who in moments of great stress or despair lost control of responsible behavior and persons whose crimes were facilitated by poor judgment or temptation Again different characteristics apply to the habitual or professional criminal Experts in burglary or safe cracking artists in their precision work present less of a charac

terological puzzle than criminals whose brutal acts of violence shock the public and spread fear and panic

Some of those who commit crimes are mentally disordered Psychoses epilepsy and mental deficiency can be diagnosed in many cases A large number of delinquents belong to the group of neurotic or psychopathic individuals Psychiatric investigations have brought out a great many factors that seem vitally important in the evolution of the personality of certain criminals Some attempts have been made to postulate the existence of an entity the criminal character' Fundamental mechanisms have been elaborated which involve almost exclusively the effects of early distorted or disharmonious relationships in the family or its substitute the frustrated need for love and the subsequent traumatic impact on the developing personality Accordingly, the criminal is seen as sick and at least potentially curable It is implied that all persons are born equal and possess the same potentialities for goodness or badness depending solely on early influences It must be stated however that unfavorable early influences are not peculiar to delinquents and that on the contrary the emotional milieu may have been quite adequate Moreover all explanations of criminal personalities lack convincing substantiation in view of the fact that the same social circumstances the same inner problems, compulsions fears mechanisms of hostility aggression and frustration exist in the minds of a wide variety of individuals whose totally different behavior is not manifested in criminal activities What has been called the X-factor the specific element which determines why some people become criminals while others do not cannot be defined in simple cause effect relations The assumed causes which impel one person to commit murder exist for many other persons who do not become murderers

The psychopathic criminal is in many aspects *unsocial* rather than anti social He has to begin with, not the same potentialities for being good or bad because of his inherent peculiar lack of empathic capacity He therefore cannot distinguish between right and wrong since he experiences in a manner in which he is the navel of the world This does in no way imply that he is a born criminal but it explains his failure to develop social attitudes that hold the rights of others in esteem He does not necessarily hate society or cultivate a rebellious philosophy but rather lacks any appreciation of the meaning and value of the social structure In this respect he is primarily unsocial The discrepancies between his way of experiencing social life and that of his surrounding world create an eternal dilemma for a testifying psychiatrist Public in-

dignation is bound to be especially severe if a criminal shows no remorse or guilt. Formalistic legal psychiatry forces the psychiatrist to decide the question of legal responsibility on grounds of the defendant's ability to distinguish between right and wrong. While it is one thing to rule out judgmental defects associated with mental retardation or psychoses, it is quite another thing to assess fundamental dysfunctions that determine an individual's manner of experiencing. The assumption that in the face of normal intelligence and the absence of major mental disorders one person has as adequate capacities for socialized behavior as the next leaves no space for the psychopathic criminal. He knows, of course, the meaning of law, but cannot utilize his knowledge for the erection of a hierarchy of social values.

Offenses may include the whole register of crimes and delinquencies: theft, forgery, embezzlement, robbery, and acts of brutal physical violence. The degree of dangerousness depends among other things on whether lack of empathic endowment is associated with aggressiveness and brutality. An adolescent boy, aroused by an argument with a playmate, stabs and beats that boy to death in a most brutal fashion. He then hides the corpse and goes home as though nothing had happened. When finally arrested and questioned he offers the explanation that he did it because he was extremely annoyed. Examination reveals him to be of average intelligence and normally oriented to reality; he shows no regret or concern. Many brutal sexual assaults are committed by psychopaths who did not derive pleasure from being brutal but who used destructive force because they had no use for troublemakers, i.e., resisting women. A professional robber, disappointed because he found only a few cents on a park victim, cuts off the tip of his victim's nose and stabs him to show his anger. A young fellow with a long record of delinquencies, tired of his wife and fed up with his baby's crying, walks out and establishes himself across the street with a married woman whose husband is in the service. When the husband returns unexpectedly, the psychopath lets him have it, manhandles him severely and throws him out of his own house. Finally arrested after the husband's complaint, he comments, "the jerk's nerve to go make trouble for me!"

Such sketchy illustrations demonstrate some specific aspects of psychopathic feeling deficiencies. These are not criminals who are driven by hate to get even with a world of injustice or compelled to be tough in order to exhibit their manliness. This kind of criminal behavior, while not caused, is conditioned by dysfunctions in empathy, which we

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find in personalities who commit some of the most dangerous and merciless acts of violence

Therapeutic Potentialities

It is always incorrect, and it leads to distorted therapeutic concepts, to refer to "the psychopath." Many psychiatrists, social and legal authorities are likely to consider such a person a poor risk for treatment. We must strictly adhere to the principle of individuality and see the psychopathic patient in terms of individual characteristics and disturbances which differ from case to case and offer dissimilar therapeutic prospects. All generalizations on matters of psychopathic behavior are misleading and may do an injustice to the individual patient. A great deal depends on whether the patient is subjectively aware of inner difficulties and seeks help or is a troublemaker whose conduct in the community causes serious alarm.

In so far as psychopathic personalities are not sick but characterologically abnormal individuals, therapeutic planning must be based on a realistic assessment of the potentialities. The psychiatrist who treats a psychopath can be compared with an internist treating a patient with valvular cardiac dysfunctioning. In both instances treatment cannot effect the basic pathology but aims at restoration of a state of compensation. The cardiac patient with a valvular lesion who leaves the hospital in a state of adequate circulatory functioning and who moreover has learned to adapt his physical activities to his capacity potential, has been treated successfully. He cannot be cured but he has been enabled to function adequately. It is this principle of compensation versus decompensation which sets the background for the therapeutic management of psychopathic patients.

Assessment of the predominance of one of the basic dysfunctions or of the manner in which they are co-existing in the individual case is a prerequisite for effective therapy. Generally speaking, dysaffectivity offers the best opportunities for treatment procedures whereas disturbances in conation offer less and disturbances in empathy hardly any. Whatever therapeutic management is chosen, it must cover two distinct phases: (1) the symptomatology of the moment and (2) planning of a style of living that will permit the best possible adjustment. With regard to phase one several aspects should be kept in mind. If the affective disturbances are acute and have contributed to a state of crisis with mani

festations of intense irritability, sleep impairment, or drug addiction symptomatic treatment should be carried out in a very intensive manner This must be associated with psychotherapeutic sessions especially since many psychopaths have an urge to unburden themselves in an endless stream of rationalizations which often impress the less interested listener as a kind of emotional incontinence In some instances psychoanalysis or other forms of psychotherapeutic sessions ranging over a prolonged period of time can be of great help in creating a relative degree of self-knowledge Many psychopaths who show mild disturbances in conation profit immensely from seeing the psychiatrist at regular intervals to report on their activities They ever so often reach a stage of restless ness and are about ready to quit a job or project If instead of being left to themselves they have the opportunity to discuss their doubts and crises to air their resentments and to find new encouragement the effects can be quite favorable This task requires great tact and patience but is as instrumental in keeping the patient in a state of compensation as to return to our analogy, digitalis maintenance treatment in the case of a cardiac patient

The re orientative phase of treatment aims to find a suitable style of living that will enable the psychopathic patient to function at the best level commensurate with his potentialities This usually requires insti tutionalization which has the advantage of continuous observation well organized group life and an active therapeutic and occupational sched ule It is true that most mental hospitals are not set up to care for psy chopathic patients In the absence of a regular schedule such patients form cliques with other psychopaths whom they spot instantly and disrupt the routine of the ward Some hospitals however have worked out schedules that keep these patients occupied and interested If prop erly chosen some psychopaths who cannot be self supporting and repeatedly fail to adjust in the community do excellent work in the con trolled environment of an institution where they can achieve a status of semi employee One must expect periodical decompensation states manifested by unreliable and offensive behavior yet this can be kept at a minimum Instead of being worthless to themselves and to the com munity they may again perform valuable services as long as they have a politely but firmly enforced regular program Quite a few graduate acquire new interests and gain a more solid outlook After leaving the hospital they should report regularly to psychiatric clinics for con tinuous treatment is always required to keep them in a state of com pensation

The more malignant psychopath, who has a serious criminal record is for the most part displaced in a mental institution He does not benefit and often corrupts the morale of other patients and of employees as well Here advocation of segregation in special institutions is indicated No adequate institutions have as yet been organized to receive these people Some European countries have reported excellent results with special colonies organized on psychiatric rather than penal principles While the patients are securely segregated from society they work get wages and live a regular kind of community life in the colony Group therapy sessions as well as individual sessions are held regularly Patients become eligible for trial visits or discharge if they are considered good risks

The question of drastic procedures comes up in cases where the family s tolerance is exhausted or where the prognosis appears quite hopeless Psychosurgery has been recommended and tried in a variety of cases of psychopathy Extreme caution in the selection of cases must be exercised since the alteration of frontal lobe functions may aggravate rather than improve the clinical picture Lobotomy cannot change fundamental characteristics of the personality in such a way that a person who is dishonest and callous becomes a truth-loving exemplary citizen Furthermore postoperative personality disturbances, especially in the sphere of inhibition and intellect, must be considered Lessening of inhibition may become a difficult problem to cope with Individuals who were preoperatively fairly tactful and restrained may become quite coarse and vulgar At best, in carefully selected cases of psychopathy the operation may decrease a tendency to violence and attenuate uncontrolled aggressiveness General clinical experience with surgical procedures has not been favorable because the fundamental characteristics of most psychopathic personalities could not be advantageously altered

No one likes to take the initiative of committing a psychopath to a mental hospital, and many physicians hesitate even in making the correct diagnosis It is not generally realized that many crimes could be prevented if potentially dangerous individuals were committed in time Hesitation or a benefit of-a doubt attitude of physicians may have grave consequences for society Moreover early recognition of psychopathic tendencies can lead us to adopt effective therapeutic steps without wasting valuable time Preventive psychiatry is as important to society as it is to the psychopathic person who can thus be protected from becoming involved in difficulties with which he cannot cope

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CHAPTER VI

THE TOXIC AND ORGANIC REACTION TYPES OF MENTAL DISEASE

By FRANKLIN G. EBAUGH

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THE TOXIC REACTION TYPES

The toxic or delirious reactions and the organic reactions are closely related and it must be borne in mind that there may be variations in each depending on the individual involved that there may be transitions from one to the other and that the two may occur together at times In general the delirious reactions and the organic reactions have the following in common (1) central nervous system disturbance and (2) disordered personality function Toxic reactions however are dependent upon transient pathology of the central nervous system and usually leave no residuals the process is reversible and recovery usually is complete, treatment is directed toward bettering the support of the central nervous system Organic reactions on the other hand depend upon intrinsic destructive damage which usually is irreversible the prognosis is variable and there may be a permanent impairment of personality function treatment attempts to ameliorate and eradicate the pathology The fundamental differentiating characteristics of the toxic and organic reaction types make it necessary to discuss them separately

A "*reaction of delirium*" is a disorder of the "psychobiological"* functioning of man dependent upon edema and other temporary brain changes associated with general toxic and toxic-infectious states and characterized clinically by disorientation, hallucinations, fear and the many variable somatic and neurological manifestations common to intoxications, infections and the disorders producing poor central nervous system support.

Delirious reactions are said to constitute approximately 10 per cent of all psychoses. We have found that they account for from 2 to 5 per cent of the psychiatric problems met with in the general medical-surgical hospital and dispensary. In regard to these percentages it must be borne in mind that statistics may be misleading in that the toxic psychoses frequently are not admitted to psychiatric hospitals and that they are all too frequently overlooked or considered mere incidents in the course of intercurrent disease.

The understanding and treatment of the person as a totally integrated individual with a complaint problem rather than the attention to a mere isolated complaint constellation should always be the primary consideration of the physician. The practitioner should guard against deliria in such conditions as the following: all cases of hyperpyrexia, whatever the cause; cardiovascular and cardiovascular-renal disorders, particularly if peripheral edema, marked urinary changes, or evidences of nitrogen retention are present; head injury; cases with acute impairment of the sensory apparatus, especially vision and hearing; cases to which anesthetics, hypnotics, opiates or other drugs are administered, and alcoholics sick in any way. If the physician utilizes his neurological acumen in detecting the presence of tremors, reflex changes and the other indications of brain irritation and edema, he will be in a position to forestall or at least to treat more adequately many deliria. If he utilizes a mental status examination in checking the patient's general mental grasp, orientation, feelings and sensations, he will be able to detect a high percentage of such reactions before they reach a dangerous state. In addition he should evaluate carefully the type of personality involved, the special situations which may have occurred during the development of the underlying condition and the amount and special characteristics of the toxin, infection or other causative factors. De-

* Psychobiology is a pluralistic empiric approach utilizing genetic dynamic methods to the study and treatment of all levels of the whole man with his activities as an integrated individual. More briefly, we study the growth and development of the individual as an integrated whole.

lirium is the most frequent of all of the so called psychiatric problems complicating and coloring the general or special complaint problems that the physician is called upon to manage

The occurrence of delirium should not be considered merely incidental to the principal disease picture It is a complication that may and in a great percentage of cases does interfere with the treatment of the presenting clinical problem To say the least it increases the suffering prolongs the morbidity and may necessitate special or prolonged hospitalization of the patient it may even be a personality disorganizing factor of such magnitude as to produce chronic invalidism and incompetency The delirious patient befuddled disoriented hearing threatening voices misinterpreting situations overwhelmed by misgivings and fear and given to action is in potential and acute danger of injuring himself even of losing his life by jumping from bed rushing from the house in inclement weather or falling from a window A very large percentage of deliria either is preventable or can be ameliorated if recognized early It is with these facts in mind that the following discussion has been arranged

General Considerations

The *delirious reactions* are disorientative and usually hallucinatory states with a component and usually a predominating affect of fear they are closely connected with somatic conditions in that they are dependent upon or associated with intoxications by drugs or poisons nutritional disturbances circulatory phenomena and metabolic disorders These disturbances produce temporary brain changes which are in the nature of edema or the obscure concomitants of fever and acidosis

The delirious reactions are characterized by

(1) Clouding of consciousness and drowsiness with associated feelings of haziness

( ) Deficient mental grasp with either partial or complete disorientation leading to a state of bewilderment

(3) Dream like or nightmare like imaginative experiences when awake with a tendency to misinterpret the situation in keeping with the haziness and fearfulness

(4) Occurrence of vivid hallucinations and illusions of sight hearing tactile sensibility and position

(5) Frequently changing delusions
(6) Affect of fear and suspicion

Etiologically the deliria may be grouped as follows

(1) Those arising in a setting of intoxication by exogenous toxins or poisons such as alcohol, opiates bromides barbiturates, etc

(2) Those arising in a setting of infection and chronic cachectic states

(3) Those arising in a setting of malnutrition, deficiency diseases (pellagra avitaminosis, etc) and metabolic disorders (hyperthyroidism uremia exhaustion states, etc)

(4) Those occurring as a part of an "organic reaction" such as paresis cerebral arteriosclerosis etc

It should be borne in mind that delusional states, such as the paranoic and paranoid have clinical features quite similar to those mentioned above and therefore may have to be considered in the differential diagnosis However, these states are more clearly personality- and complex determined and usually are devoid of the neurological and toxic signs common to the deliria In addition there are transition forms which make it impossible to draw sharp differentiating lines between the two types of reactions For instance, toxic states may occur with few or no symptoms and with apparently clear paranoid development On the other hand the complex-determined and the mentally determined disorders occasionally occur with disorientation bewilderment and toxic symptoms Therefore, the physician must ever consider the total disease picture in determining whether a delirious reaction is toxic or whether it is incidental to a more sweeping personality-and psychobiologically-determined disturbance

The general facts relative to a delirious reaction as elicited on indirect examination (history of the illness from all sources), reveal that the onset of the condition usually is quite sudden and frequently makes its appearance at night or when the patient s surroundings are changed This onset is characterized by objective evidence that the patient is misinterpreting sounds conditions and occurrences in his environment has dream-like fancies and hallucinations and is incompletely or completely disoriented The hallucinations usually are vivid and most frequently concern vision and audition, although the skin may also be involved If the above mentioned features are not foremost then the restlessness of the patient, his tendency to leave his bed and to wander away and his re

action or annoyance irritation, or fright may signal the beginning of such a reaction

The detailed facts relative to a delirious reaction as elicited by the direct examinations are considered under the following topics

Mental Status

(a) *General Behavior*—The delirious picture varies but practically always presents recognizable evidence of a personality disorder There may be on the one hand quietude with muttering and on the other hand great activity with raving Objectively the patients appear confused and bewildered They are extremely apprehensive fearful and restless At times they go through various movements signifying certain occupations (occupational delirium) Objective evidence of hallucinations may exist such as the dusting of the bedding picking up imaginary bugs covering the nose to ward off odors cocking the head to listen and answering imaginary voices In general the behavior of these patients is in keeping with their hazy orientation apprehension fear and imaginations

(b) *Stream of Talk and Activity*—Speech usually is irrelevant and incoherent Spontaneity may be varied depending on the content

(c) *Mood*—The mood is markedly labile and is characterized by apprehension and fear in reaction to the hallucinations and delusions present

(d) *Special Preoccupations and Content*—Delusions are prominent especially those of danger of death to the patient Usually the delusions are shifting and transient and are based largely on a tendency to misinterpret the situation Persecutory trends are often found

Hallucinations are extremely common particularly of the visual type The patient sees animals of all descriptions distorted faces etc Auditory hallucinations occur especially in more advanced states in certain types of exogenous deliria and in cases with a hyperacousia The patients hear voices calling them names and telling them something dreadful is about to happen Tactile hallucinations frequently occur The patients feel sensations over the body which they misinterpret as being bugs or worms On the other hand a lack of sensibility may lead them to believe that a leg or arm is missing Hallucinations of smell may occur and this is said to be the case more often in personalities with a

rather large latent homosexual component Illusions are frequently present

(e) *Sensorium and the Intellectual Resources*—Disorientation for time place and person or at least one of the three occurs in the delirious patient Likewise, memory and retention defects are present The deficiency in mental grasp, the haziness or cloudiness of consciousness and the difficulty of attention may explain the defect in the formal memory and intellectual processes Judgment and insight are impaired

Physical Findings

The physical findings in the group are of the utmost importance The patient often appears acutely ill and may show signs of collapse with a high temperature and a rapid irregular pulse of poor volume Marked vasomotor symptoms, flushing of the face and sweating are frequent Headache and malaise are common subjective complaints Definite somatic disease such as pulmonary tuberculosis pneumonia various forms of myocardial insufficiency cardiorenal disease and pernicious anemia are often encountered Involvement of the gastrointestinal system is revealed by abdominal pain, nausea vomiting and extreme constipation Evidence of genitourinary disease, such as retention difficulty in elimination or incontinence of urine may occur There are no special pathognomic neurological signs but definite disturbances of the autonomic nervous system exist such as tremor dilated pupils, changes in blood pressure pallor and flushing Trophic changes are often seen Metabolic and endocrine disturbances frequently underlie the delirious reaction

Laboratory Findings

In general, clinical pathological investigations should be employed to the fullest extent According to the underlying physical condition blood counts sedimentation rate chemical and microscopic urinary examinations blood chemistry studies determination of the basal metabolic rate examination of the blood urine and spinal fluid for drugs and bacteriological examinations may be utilized in the study of the patient

The question frequently is raised regarding the role of personality and other factors in the development of delirium when an individual is subjected to a high temperature, certain drugs anesthetics, or infections

An elderly person, particularly one with sclerotic arteries weak circulatory apparatus inefficient excretory system and other debilitated organs is especially prone to delirious reactions as are persons with an affective disorder, such as a depression or a mild elation In addition individuals given to daydreaming queer behavior, fearfulness and suspiciousness frequently react in a delirious fashion when their consciousness or awareness is clouded or dulled Furthermore any person who has long been under strain or worry and feels and acts tense or is apprehensive and anxious easily can become confused and fearful Since deliria may develop in so many personalities and under such varied conditions no accurate statistics are available as to the incidence of the various types of deliria

Prognosis

In general the prognosis of the toxic psychoses is very good and recovery is the rule The mortality should be small if the essential early treatment is given and the patients are admitted promptly to psychopathic hospitals The duration of the psychoses usually is brief particularly in acute delirium However, protracted toxic states occur Delirious like states may occur in a setting of eclampsia brain tumor syphilis and senility In these instances since lasting brain damage frequently is produced the retention defect and confabulation characteristic of the organic reactions may persist It is important to realize that a delirium may temporarily cover up a more profound psychotic development i e manic excitement schizophrenic reaction and general paresis

General Principles of Treatment

It can be seen from the foregoing that the treatment of the toxic psychoses requires knowledge of the whole domain of general medicine Naturally the specific therapeutic measures will be dictated by the type of infection or poisoning which is the basis of the psychosis There are however, certain general principles which are applicable in the majority of cases these are outlined in the following paragraphs

(1) Careful eliminative procedures are fundamental Among these are catharsis colonic irrigations gastric lavage attention to the fluid balance of the body and urinary excretion promotion of elimination via

rather large latent homosexual component Illusions are frequently present

(c) *Sensorium and the Intellectual Resources*—Disorientation for time place and person or at least one of the three occurs in the delirious patient Likewise memory and retention defects are present The deficiency in mental grasp, the haziness or cloudiness of consciousness and the difficulty of attention may explain the defect in the formal memory and intellectual processes Judgment and insight are impaired

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the skin and the utilization of chemicals to promote excretion in certain types of intoxication

(2) An attempt should be made to control infection, if it is present, and to eliminate foci of infection Surgery often is required for removal of infection and the treatment of hyperthyroidism X-ray and radium may also prove of value The administration of serums and vaccines may help to secure immunity against various infectious states

(3) The efficiency of the 'support systems' should be bettered For instance cardiac stimulants and regulators should be utilized in case of actual or even threatened cardiac decompensation

(4) Dehydration and acidosis must be minimized and controlled Routine dietetic and tonic treatment is required in the management of the majority of psychoses of this group Transfusions are indicated if the hemoglobin value is below 50 per cent They are extremely valuable and may be life-saving in hemorrhage, shock, certain poisonings especially carbon monoxide, infectious diseases and severe secondary anemias

(5) If cerebral edema is present spinal drainage and the cautious intravenous administration of hypertonic solutions, preferably 5 per cent saline or 50 per cent glucose are indicated

(6) Sedation and its proper application with full appreciation of its dangers is important Sedatives are of value in that they enable the patient to rest, but they should never be given for the sake of convenience in nursing care Hydrotherapy and/or chemical sedation may be employed

Of the hydrotherapeutic measures, the most helpful is the continuous or neutral tub The temperature of the water should range from 97 6° (in case of hyperpyrexia) to 99°F Care must be taken to keep the temperature in the tub room constant The patient may be kept in a continuous tub for 1 to 24 hours without difficulty The time element is solely dependent on the effect desired and the patient's physical status The delirious patient's vegetative nervous system usually is unstable during his acute illness and, therefore, shocks in the form of cold water must be avoided Packs usually are contraindicated because the restraint involved promotes fear

No hypnotic drugs should be given the patient during the day, but they are permissible at night when he is more apt to be disturbed The type of hypnotic used depends on the type of delirium and the toxic agent causing the disorder In general, a quickly acting and rapidly

metabolized or eliminated drug such as sodium amytal paraldehyde etc, is indicated The hypnotic should be given in a large enough dose to cause sleep and should be administered before darkness since the latter is prone to increase the patient s disorientation and fear In beginning delirii continuous sedation for a short time occasionally is helpful in preventing a prolonged reaction

(7) The nursing care is worthy of a great deal of careful consideration and requires understanding ingenuity and skill The patient must be continually reassured as to the intentions of the nurses and physicians Furthermore the management of the environment with the elimination of disconcerting shadows sounds and movements is necessary for the comfort and progress of the patient He should be safeguarded from accident and suicide during the acute manifestations of the psychosis

(8) The verbal productions of the acutely ill patient may be of the greatest value in effecting an adequate personality adjustment when the acute episode is past and therefore should be noted carefully This is particularly important in the delira due to drug and alcohol addiction In these cases some analysis of the personality with subsequent attempts at rebuilding is the only basic way of preventing recurrences

(9) A prolonged period of convalescence is of great importance in preventing late sequelae of the acute infections

(10) Follow up care is essential

Classification

The above discussion has been concerned with the toxic reactions in general We shall now proceed to a more individual consideration of the etiology and therapy of these conditions

The Toxic Reaction Types

I Psychoses due to Drugs and Other Exogenous Toxins
 1 Alcohol
  a Delirium tremens
  b Korsakow s psychosis
  c Chronic alcoholism
 2 Bromides
 3 Barbiturates

4 Marihuana
5 Opium
6 Cocaine
7 Miscellaneous drugs
  a Atropine and related drugs
  b Carbon monoxide
  c Lead
II Psychoses with Somatic Diseases

Reversibility of Toxic Changes of Delirium

From a clinical point of view there is usually no need to utilize the electroencephalogram in the diagnosis of delirium Simple psychological tests designed to evaluate the awareness or attention of the patient usually are adequate However, the electroencephalogram may be of aid in clinical confirmation, in evaluation of the degree of physiological restoration and in following the course of specific therapy Further, the method has great value in experimental physiological studies of spontaneous and induced deliriums

The sensitive needs of the cerebral tissue, particularly of the cortex, are well known Serious disturbances in functional integrity of the cortex seem likely in the course of the physiological derangements associated with physical disease and delirium These physiological derangements may result in (1) disturbances of transportation of oxygen dextrose and other essential foodstuffs to the brain (2) an alteration of the essential intracellular integrity in metabolism of the brain or (3) a combination of the two

Methods of study of cortical function in human beings are limited but knowledge based on animal experimentation indicate that the electrical activity of nerve tissue closely parallels its functional integrity and opens the possibility of a similar approach to the study of the human cortex The electroencephalogram offers a method of study of the electrical activity of the human cortex

Romano and Engel[61] studied deliria in 53 patients by utilizing psychological and electroencephalographic techniques The basic pathophysiological factors underlying the delirious state were multiple and included diseases such as acute or chronic cardiac decompensation acute or chronic pulmonary decompensation resulting from chronic

asthma bronchitis emphysema or recurrent pneumonitis malnutrition and wasting due to chronic infection or neoplastic disease chronic alcoholism and delirium tremens the toxic state due to acute infections and other types of metabolic diseases with associated deliria

Psychological and electroencephalographic studies of these patients with delirium of various cause intensity and duration revealed electroencephalographic abnormalities in all patients who had disturbances in consciousness These electroencephalographic changes were found to be reversible to the extent to which clinical delirium was reversible The character of the electroencephalographic change appeared to be independent of the specific underlying disease process but was directly related to the intensity duration and reversibility of the noxious factors as modified by the basic physiological status of the body A correlation was established between the electrical abnormality and the primary psychological symptoms in delirium i e the disturbance of consciousness but there was far less correlation with the more personal aspects of behavior namely the character and expression of anxiety the content of thought and the nature of sense deceptions

It should be reemphasized then that the electrical disturbance of the brain is reversible to the extent that the delirium is reversible

Romano and Engel[12] further studied delirium and the reversibility of the electroencephalogram with experimental procedures such as inhalation of oxygen changes of posture, blood transfusion administration of adrenal cortex substances and infusion of dextrose From the data they obtained, it is clear that the intelligent treatment of delirium must include efforts to reverse the major physiological derangements accompanying the underlying disease The statement that permanent cortical damage becomes increasingly likely the longer the noxious factors are acting is amply supported by clinical and electroencephalographic observations The greatest change in reversibility is found in the early and acute phases The delirious cardiac patient with pulmonary disease should not be permitted to remain anoxic until spontaneous recovery occurs Cheyne Stokes respiration should be treated by an available method, preferably by the immediate administration of oxygen Special attention should be directed toward restoration of the normal physiological and biochemical milieu of the brain and avoidance of the addition of further noxious factors In the treatment of delirium then it is of utmost importance to correct the reversible physiological disturbances as rapidly as possible to prevent permanent damage

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Psychoses Due to Drugs and Other Exogenous Toxins

Alcohol

The widespread use of alcohol with its attendant social and psychiatric problems causes alcoholism to be one of the most important conditions a physician is called upon to treat. We shall limit our discussion to its psychiatric aspects. Alcoholic psychoses form less than 10 per cent. of the first admissions to state hospitals (Mott, Garvin). The Annual Statistical Review for all state hospitals and licensed institutions showed an incidence of 6.5 per cent. in 1933. At the Colorado Psychopathic Hospital the incidence is 5 per cent. for the 10 year period 1924 to 1934. With increasing skill in diagnosis these percentages may be lowered, since many cases which are now assumed to be alcoholics can perhaps be shown to belong to other reaction types.

The etiology of alcoholism is very complex. Many clinical syndromes, such as mania and schizophrenia, may be associated with the excessive use of alcohol in only an incidental relation, while in other syndromes, such as psychoneurosis and homosexuality, alcoholism may be the presenting symptom. Most psychiatrists now feel that there is an underlying personality disorder which permits chronic alcoholism and its complications to flourish. Lambert's suggestion (Osler and McCrae, 1925) that young men drink to enjoy by obtaining release from inhibitions and that old men drink to forget by obtaining release from uncomfortable facts and memories, points out the fact that the alcoholic is trying to escape from reality. It is necessary to determine in each case the specific conflicts from which the alcoholic seeks escape, since no general rules seem applicable. Failure of emancipation, overattachment to some person, homosexual or perverse sexual tendencies, constitutional inadequacies of affect, inability to accept one's own mediocrity and poor preparation for living with resultant fears and feelings of inferiority are among the causes often found. Social drinking or occupational association with alcohol does not lead to chronic alcoholism with psychosis unless some personality conflict is present. It is interesting that whole groups of people seem to have preferred patterns of behavior with which to meet their conflicts. The Irish are much more frequently alcoholic than the Jews. Inland and rural communities have a low ratio of alcoholism and a high one of pauperism and insanity, while the opposite is true in mining, manufacturing and maritime communities.

(Lewis) There seems to be no consistent relation between alcoholism and either habitus or temperament though many attempts have been made to make such a correlation

In presenting the various types of alcoholism it should be remembered that it is commonly a prominent feature in psychopaths epileptics manic depressives, psychoneurotics, schizophrenics paretics and the mentally deficient The only true alcoholic psychoses are delirium tremens Korsakow's syndrome and chronic alcoholic deterioration In addition to the true alcoholic psychoses there are other conditions in which alcohol is a complicating factor While it may enter into any psychosis it is especially prominent in alcoholic paranoia and alcoholic hallucinosis These are clinical pictures of which alcoholism represents but a phase (Kirby Peabody Schneider) Alcoholic pseudoparesis is probably some obscure organic disease due to several factors including alcohol Convulsive disorders associated with alcohol are not due to the drug alone and a separate entity such as alcoholic epilepsy is not warranted

Pathological intoxication (mania a potu) first described by Flemming in 1844 is an acute mental disturbance which occurs in an unstable susceptible person on drinking even a small amount of alcohol The patient manifests over a short period of time acute excitement or furor with confusion disorientation delusions hallucinations and profound mood disturbance (anxiety depression rage) This furor is followed by a prolonged sleep and an amnesia for the episode This condition is not considered to be a true psychosis

Delirium tremens usually occurs after 7 or more years of chronic alcoholism in persons over 30 years of age Precipitating factors in weakened individuals during a severe or prolonged debauch include the following meager food intake with its accompanying starvation acidosis dehydration and avitaminosis trauma of any type but especially fractures exposure, infections especially influenza and pneumonia overexertion operations hemorrhage psychic shock ingestion of extraordinary amounts of alcohol Abstinence with sudden withdrawal of alcohol is becoming discredited as a precipitating cause in spite of some evidence to the contrary

The premonitory symptoms of restlessness irritability insomnia and aversion for food usually precede the acute onset by several days Characteristic physical findings are an excessively coarse tremor most marked in the fingers tongue and facial muscles, indistinct speech persistent in-

somnia congestion of face and conjunctivae, anorexia and constipation, rapid low tension pulse unless a complicating hypertension or cardiorenal disease be present profuse perspiration dilated pupils which often react sluggishly variable tendon reflexes, leukocytosis and, in over 50 per cent of the cases albuminuria

Nightmares and single fleeting hallucinations often precede the characteristically prominent visual hallucinations The visual hallucinations consist of terrifying, often misshapen, multiple animate objects which appear to move and menace the life of the patient, and from which he may struggle to escape The animals are usually colorless have a tendency to be reduced in size (Lilliputian) and are said to be extremely vivid Simple hallucinations such as sparks lights and shadows are commonly seen Illusions based upon misinterpretations are frequent from the onset Shadows and spots on the bed clothes or furniture become animate and threatening Illusions can be provoked by handing a patient a blank sheet of paper and asking him to read a request with which he may comply, hallucinations may be suggested by a positive command that he see an object Auditory hallucinations are common and vary from simple sounds which may be misinterpreted by the patient as someone shooting at him, to threatening or derogatory voices The hearing of complete sentences is uncommon Tactile hallucinations are not uncommon and may be associated with tactile illusions caused by paresthesias Combinations of hallucinations are interesting the patient sees men behind trees and hears them shooting at him the patient attempts to pick up the insects which he feels and sees There may be occupational delusions, the aviator flies, the farmer drives his team the mountaineer cattleman sees bears which he wants to shoot The delusions and hallucinations may cause suicidal attempts, if the patient impulsively tries to escape from the threatening objects, or homicide should he attack them Olfactory hallucinations are much less frequent and usually are of a threatening character, such as poison gas

The patients are restless, difficult to keep in bed always trying to do something Sleep is very disturbed, and the delirium is exaggerated at night Usually they are completely disoriented at the height of the delirium and may be disoriented for a time even after the hallucinations and recent memory failure subside They retain their identity i e, know who they are what their job is who their relatives are, where they live etc In contrast to the other deliria there is a quick reaction time with no slowing of the stream of thought although the latter usually shows

poverty of ideas and a loss of critical power. Speech is incoherent and distractible at the height of the delirium. The mood varies markedly from mild depression to elation and usually is tinged with anxiety, fear or outright terror. Irritability is common, but good natured amusement or silliness may be present. Since the patients are easily distracted, attention can be obtained for only a very short time. Retention and recall are very faulty, as is recent memory; remote memory may be good. The patient's thought is concerned with the hallucinations. Because of the marked suggestibility, any topic mentioned may elicit lengthy replies of a confabulatory nature. Judgment and insight are obviously absent, although at times the patient may have a good humored appreciation of the absurdity of his delusions.

The delirium usually runs a course of 2 to 4 days with recovery following a long sleep. The more delayed the recovery, the more probable are organic changes and deterioration. Deliria which are prolonged over two weeks are practically all complicated by other systemic damage. Protracted, connected scenes in the hallucinations or a predominance of auditory hallucinations suggest an underlying schizophrenia.

In addition to the general nutritional, eliminative and supportive therapy of deliria as outlined above, *treatment* should be directed especially toward the avoidance of cardiac failure (digitalis if indicated) and the relief of brain edema through spinal drainage and intravenous hypertonic solutions. Alcohol should be withdrawn immediately. Complications, especially heart failure or penumonia, may cause a mortality of as high as 20 per cent.

Korsakow's psychosis is characterized by disorientation, loss of recent memory and extreme confabulation with relatively good understanding of that which is within range of the senses but not dependent on memory. Polyneuritis is a frequent accompaniment. The psychosis generally arises during the course of chronic alcoholism, although it has been seen in the course of pernicious vomiting of pregnancy, typhoid, malaria, tuberculosis, puerperal fever, septicemia, beriberi and influenza, as well as in lead or other metal poisoning. It is seen more frequently in women and in persons over 50 years of age. There is always some severe damage to the central nervous system (Adolf Meyer and Carmichael and Stern).

Headaches, dizziness and fainting are prominent symptoms. Disorientation as to time is marked, and gaps are filled in by retrospective falsification. Many of these can be suggested to the patient. Misidenti-

fication of people is common The mood is anxious, later indifferent, dull, suspicious or even humorous The polyneuritis produces muscular pains tenderness over the nerve trunks paresis wrist and foot drop, paraplegias, anesthesias, paresthesias and absent reflexes Nystagmus and ocular palsies may occur

The patient may clear up in six or eight weeks but usually shows only gradual improvement for months Some degree of permanent impairment of memory working ability intellectual and social standards is common The neuritis may improve and eventually disappear

Recent work has pointed to an association between the Korsakow syndrome and avitaminosis (Carmichael and Stern, Winkelman Zimmerman) The pathological lesions in the cortex and spinal cord of endemic pellagrins and chronic alcoholics have been shown to be similar Clinical investigation tends to confirm this association (Cobb Wechsler, Strauss Spies) Spies has instituted a therapeutic regime in these conditions in which he stresses increased intake of vitamin G (B) (see on a later page under Pellagra) In addition to dietary therapy the treatment should emphasize elimination Special attention should be given the neuritis with bed rest, judicious use of support to prevent foot drop and massage exercise and electricity for affected limbs after the pain and tenderness have disappeared

Chronic alcoholism develops in the habitual drinker after years of imbibition The fundamental causes are those already discussed which underlie all alcoholism Insidious changes in the intellect and character gradually make their appearance and are seen in impulsive acts, decline in energy and efficiency, loss of ambition and deterioration of ethical and moral standards The chronic alcoholic may carry on his ordinary work fairly successfully for many years before the deterioration becomes evident This deterioration is manifested by gross lability of affect, irritability, chronic untruthfulness, facile rationalization for the patient's inability to deal with reality, projection of his faults upon others and carelessness of personal appearance and associations Social and family responsibilities are neglected or evaded by complaints, recriminations excuses or a superficial humor He is exceedingly sensitive to criticism and will shift quickly from the usual carefree euphoria to violent irritability at a word of implied reproval He feels that he is a victim of circumstance who has been wronged through no fault of his own Even though he is a most congenial drinking companion he may become quite unreasonable and vituperative when forced to face

disagreeable facts His home life usually is unhappy sometimes because of his drinking but more often as a result of one of the fundamental underlying causes Diffuse damage of brain tissue eventually results in deterioration which generally is complicated by arteriosclerosis or other systemic disease The later stages of chronic alcoholism are marked by severe memory defects greatly impaired attention retention and recall generalized slowing of psychomotor activity with poverty of ideas and other defects typical of diffuse damage of brain tissue

Treatment consists of long term hospitalization (six to eighteen months) where the underlying personality difficulties can be studied and appropriate psychiatric treatment applied Commitment usually is necessary to keep the patient for the required time and voluntary commitment is now becoming popular Along with an analytic synthetic personality study new work and play habits are taught and new compensations and sublimations encouraged By these methods the patient may be enabled to obtain adequate emotional satisfactions for his fundamental needs without recourse to alcohol Insight comes slowly if at all even under skillful direction

Since Widmark s microchemical *determination of the amount of alcohol in the blood* has been adopted by many countries in any legal question involving alcoholism the laboratory promises to play a part in more exact diagnosis It is desirable that such a determination be made as soon as possible after accidents misdemeanors or crime to determine the extent of the intoxication A drop of blood can be drawn from the ear or finger by suction in capillary tubes fitted with rubber stoppers and coated with a thin layer of dried oxalate to prevent coagulation Examination of the blood of hundreds of cases by this method has shown the following averages an alcoholic content of the blood of 100 to 260 mgm per 100 c c makes it probable that a person does not have complete control over his actions an alcoholic content of 260 mgm per 100 c c raises this probability to a certainty The alcoholic content of the brain and cerebrospinal fluid does not parallel that of the blood since alcohol is less quickly eliminated in the former and can consequently be detected much longer in the cerebrospinal fluid than in the blood Matossi 1932 found that alcohol can not be found in the blood of teetotalers and occasional drinkers after five hours while it is present in chronic alcoholics after a lapse of nine or more hours If these findings are confirmed it would be possible to make a diagnosis of chronic alcoholism by this method

fication of people is common The mood is anxious later indifferent, dull, suspicious or even humorous The polyneuritis produces muscular pains tenderness over the nerve trunks, paresis, wrist and foot drop, paraplegias anesthesias, paresthesias and absent reflexes Nystagmus and ocular palsies may occur

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while the elimination by the kidneys remains unaffected Wile (Love man 1934) warns against too rigid elimination because of the accom panying renal irritation If there is a rash, the application of cocoa butter and the use of soft water will relieve the irritation It is generally believed that withdrawal does not cause symptoms

Barbiturates

Deliria resulting from chronic and excessive use of barbiturates such as barbital (barbituric acid), luminal (phenyl ethyl barbituric acid), proponal (dipropyl barbituric acid) dial (diallyl barbituric acid) etc probably are becoming more frequent Following the initial stages of intoxication in which poor coordination motor retardation thick slurring speech confusion and disorientation are seen there occur auditory and visual hallucinations and delusions of all types with mood variations from well being to depression

It must be remembered that the excessive use of barbiturates is probably personality determined just as are chronic alcoholism and the drug addictions Therefore after initial toxicity is relieved treatment is aimed principally at the basic conflicts These can only be elicited by long careful analysis and observation which utilize the regular methods of history taking from the patient and relatives and which probe into the significant features of the mental status with a synthetic reconstruction in which the patient is an active participant The acute phases of a barbiturate poisoning are best handled by bed rest systemic support by pushing fluids via all routes forceful elimination cardiac and respiratory support as indicated with drugs (caffeine cora mine) carbon dioxide and oxygen heat and intravenous glucose If shock is present gum acacia is helpful As in alcoholism and drug ad diction prophylaxis is the most important treatment measure The sale of barbiturates should be restricted by law and a physician should exercise great care in prescribing any of these drugs

Marihuana

The active principle (cannabinol $C_{1}H_{4}O$) of the sprouts and leaves of the hemp plant (Cannabis sativa) is an alkaloid which is widely used in cigarette form It is estimated that there are 200 000 000 smokers

Bromide

The use of bromide is unfortunately so widespread that in every case of delirium the physician should consider and eliminate this drug as a causative factor This can be quickly and easily done by the blood bromide test (Wuth) We have found a blood bromide of 75 mgm per 100 c c significant, although 150 mgm generally may be regarded as the dangerous level It is estimated that, when 30 per cent of body chlorides are replaced by bromides, toxic symptoms are likely to occur Tolerance is variable, but persons with organic systemic damage have an increased susceptibility Levin (1933) stresses constitutional predisposition in the etiology in addition to such factors as age, general condition, cerebral arteriosclerosis neurosyphilis, chronic alcoholism and fever Diethelm (1930) describes as common to all patients the neurobiological symptoms of fatigue, drowsiness, poor attention and concentration poor memory for recent events and general slowing of the stream of thought and ability to make associations With increased toxicity come confusion thick speech, ataxia, coarse tremors and diminished sensibility When true delirium supervenes, the symptoms on a psychobiological level make their appearance These are determined by the total personality of the patient, including his initial endowment and its subsequent modification by life experiences Hence, one cannot expect the disturbances to be specific clinical entities, since there is no sharp line between the different levels of the personality, and all levels react to the toxin The cases of Diethelm showed marked eroticism as an outstanding feature of certain dosage, while intervening dosages and protracted use depressed the sexual function Hallucinations of people especially colored people, large animals and colored or moving objects are described as being present Other hallucinations, delusions, especially the paranoid type anxieties and fears are dependent upon the personality type The abatement of mental symptoms does not parallel the amount of bromide in the blood and symptoms may persist for weeks after the blood bromide returns to normal

Treatment consists of forcing fluids ingestion of sodium chloride in food and in capsules 1 gm (gr xv) t i d and the general measures applicable to all deliria Sodium chloride is not given until the blood bromide has fallen to 250 mgm per 100 c c as we have found repeatedly that its administration temporarily increases the bromide concentration in the blood by hastening the liberation of bromide from the tissues,

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Treatment consists of forcing fluids ingestion of sodium chloride in food and in capsules 1 gm (gr xv) t i d and the general measures applicable to all deliria Sodium chloride is not given until the blood bromide has fallen to 50 mgm per 100 c c as we have found repeatedly that its administration temporarily increases the bromide concentration in the blood by hastening the liberation of bromide from the tissues,

States (Treadway United States Public Health Service) Only rarely does addiction lead to a psychosis the delirious state sometimes seen during withdrawal usually is due to the substitute drugs atropine hyoscine barbiturates and codeine which are commonly given

It is accepted by most psychiatrists that the fundamental cause is psychological Therefore drug addiction should not be considered as a disease entity but rather as a symptom of underlying personality defects These defects may be on the basis of intellectual deficiency lack of adequate emotional control faulty habit training or maladjustment of the instinctual life A stable well integrated person does not become an addict even when the drug is given for prolonged periods to alleviate pain Addicts come from all walks and stations of life but usually from the upper and middle classes with a large number of professional men included Association with narcotic users which group includes many psychopaths mental defectives and criminals is the most frequent channel by which new addicts are recruited The sufferers from such chronic diseases as malignancy neuralgia and asthma form less than o per cent of addicts (Treadway) Injudicious prescriptions to unstable patients and the use of patent medicine nostrums account for some addiction The average addict takes from o 6 to 1 3 grams (10 to 20 grains) per day the limits being from 30 mgm to 4 grams (½ to 60 grains)

Whatever the reason for the addiction the addict soon needs larger and larger amounts of the drug to help him maintain his ordinary level of well being If he cannot obtain the drug certain symptoms and signs become apparent in about the following order yawning lacrimation sneezing restlessness sweating hot flashes and chills vomiting diarrhea cramps in the extremities and abdomen muscular tremors marked irritability complaints of extreme weakness *loss of weight marked pilomotor activity* rarely diplopia and occasionally death (Light and coworkers 19 9) These symptoms usually are apparent at forty eight hours reach their height at seventy two hours and subside in five to fourteen days

The habitual use of narcotics brings about character changes in lowering of ethical and moral standards impairment of efficiency and *diminished sense of responsibility Most of all there are notorious un*reliability and untruthfulness The life of the patient is centered around obtaining enough drugs to live in comfort He may commit antisocial *acts in order to obtain the drug He becomes very self-centered and*

in the world and that possibly one out of four persons in the southern part of the United States is a marihuana smoker (Bromberg, 1934)

It is inaccurate to regard marihuana as an agent responsible for crime in view of the basic antisocial character of the persons who use it Like alcohol, marihuana uncovers those antisocial qualities in the personality which really are responsible for the crime It does not cause the profound personality changes found in the users of morphine and heroin

When inhaled the drug causes a temporary intoxication After a short period of anxiety, often with fear of death, the smoker develops definite euphoria, talkativeness, feeling that time passes slowly, feelings of unreality and somatic, sensory and motor phenomena After twenty to thirty minutes, the smoker may see visual hallucinations of striking color which may begin as illusions or misinterpretations The mood is one of vivid happiness and exhilaration marked by sudden, explosive laughter Failure of memory is an outstanding trait, together with a greatly increased rapidity and richness in the stream of thought Special preoccupations are often concerned with sexual matters Since the addict wishes to import his experiences to others this habit is often practiced in groups After a time, usually less than two hours, the smoker falls into a dreamless sleep He awakens with no after effects and with a clear recollection of the happenings during the intoxication A tolerance is not developed

Treatment consists of complete abstinence and an understanding of the underlying disorder There are probably no true withdrawal symptoms Intelligent supervision in an institution usually is necessary with a concomitant personality study and discovery of the underlying conflicts, as in any other mental disorder It is desirable that a correct diagnosis be made, since many addicts suffer from major psychotic processes

Opium

The problem of drug addiction, chronic use of opium, morphine heroin, etc, is difficult and complex Since prevention is the most important part of the treatment, we feel that the most feasible plan for prevention depends upon definite government supervision and restriction of the supply of narcotics to the amount actually needed by the medical profession There are about 200,000 drug addicts in the United

Cocaine

Cocaine habitues usually acquire the habit through other addicts The majority of them are to be found among prostitutes and gangsters, although 15 per cent are said to be physicians, dentists and pharmacists The most usual method of administration is through hypodermic injection but the use of the drug in the form of snuff is by no means infrequent If this latter method is practiced over a long period of time the addict often develops an ulcer of the nasal septum

The chief symptoms after a dose of cocaine are slight dizziness and headache These are quickly followed by a feeling of well being in which the patient is hilarious with increased flow of ideas and pressure of speech and activity later there are marked motor restlessness depression weakness irritability dulling of moral sense and periods of mental confusion with characteristic somatic delusions described as worms or bugs (cocaine bugs) crawling under the skin Vivid hallucinations either pleasant or terrifying often occur they may be of Lilliputian character Delusions of jealousy and of persecution are common and may incite violence The chief physical signs consist of dilated pupils rapid pulse weakness emaciation and amnesia

The *treatment* is the same as outlined above for opium addiction but deterioration of character is more rapid and the prospects of cure are less favorable

Atropine and Related Drugs

Atropine, hyocyamine scopalamine (hyoscine) and atroscine are the principal alkaloids of the Solanaceae family Accidental poisonings are the rule suicidal or homicidal cases relatively rare Recovery is common with a 10 per cent mortality reported (Webster 1930) The leading symptoms are much the same for the group, widely dilated pupils which do not react to light or accommodation dry mouth rapid pulse flushed face Delirious features superficially resemble alcoholic inebriation although the exaltation and stimulation are more prominent marked restlessness and overactivity are combined with visual hallucinations to which the patient reacts confusion disorientation and apprehension are prominent (Kanner 1935) Mild poisoning responds quickly to withdrawal and thorough elimination (enemata gastric lavage forcing fluids) Morphine pilocarpine and caffeine are indicated in severe poisoning

suspicious, all pathological character traits are accentuated The mood is variable the degree of well being corresponds inversely to the time that has passed since the last dose As the effect of the drug wears off, he becomes restless and irritable The sensorium defects often described memory and retention failure and intellectual deterioration possibly are due to the preoccupation of the addict with his habit and to the restriction of all his energies and interests to obtaining the drug There is general agreement that heroin causes more severe character changes than any other narcotic, likewise, it is the most difficult addiction to cure

The *prognosis* for recovery from the habit is poor, possibly 10 per cent of the addicts stop using drugs after treatment While many stop temporarily relapse is common Since the tolerance to the drugs is lowered following the disappearance of withdrawal symptoms some addicts request treatment so that they can subsequently use smaller doses for a time

Treatment must be carried out in a hospital where special precautions and nursing care can be obtained It is paramount that the patient be unable to procure drugs Sudden total withdrawal is recommended only in young vigorous patients, since others suffer extreme distress and may collapse Gradual withdrawal is a favorite procedure By this method just enough drug is given to prevent symptoms, 0 2 to 0 26 gram (3 to 4 grains) daily for several days, this is followed by a gradual reduction over fifteen days so that at the end of this time none is being given The patient is not told of the amounts given and if withdrawal symptoms are present saline hypodermics can be continued for a few days Weakened addicts must be watched carefully to avoid collapse The substitution of other drugs (Town Lambert method) is not desirable Atropine and hyoscine may cause an hallucinatory delirium The barbiturates do not relieve the withdrawal symptoms and may increase the weakness and confusion The coal tar products, aspirin phenacetin and pyramidon may be given as placeboes Continuous warm tubs and hydrotherapy are valuable adjuncts to allay restlessness pains discomfort Massage is also recommended Elimination should be thorough from the beginning of the treatment An adequate diet and hematinics are indicated when the patient is able to eat Morphine is the best remedy for collapse Digitalis preparations caffeine and strychnine seem to be inadequate stimulants in this form of cardiovascular failure Adrenalin may be tried

(90 per cent) and carbon dioxide (10 per cent) are very valuable but oxygen alone is much less efficacious Haldane recommends blood transfusion Hypertonic saline to reduce cerebral edema is recommended Methylene blue and other dye mixtures administered intravenously are discredited by the Council on Pharmacy and Chemistry of the American Medical Association

Lead

Chronic lead poisoning usually is found among workers who inhale or swallow the metal in the course of their work It is said to occur also in those who come into contact with lead containing lotions and abortifacients contaminated drinking water or tetra ethyl lead gasoline

Since the susceptibility to lead varies greatly individual reactions to the poison differ widely In these reactions both physical and mental symptoms are important Physical findings include headache anorexia constipation colic, insomnia peripheral paralyses especially wrist drop and foot drop, tremors severe secondary anemia impaired vision, albuminuria and blue line on the gums and stomatitis Y Henderson 19 6 described a severe delirium resulting from inhalation of volatile fumes of lead this delirium is marked by insomnia visual hallucinations and violent excitement followed by coma and death The more chronic form which usually results from swallowing lead may show confusion slowness impaired memory irritability easy fatigability and depression Discovery of lead in the urine or basophilic stippling in the red blood cells verifies the diagnosis and serves as an index of the severity of the process

In the *treatment* of lead poisoning attention must be given first to the removal of the poison In acute cases the stomach should be washed with sodium or magnesium sulphate followed by plain water lavage elimination should be forced by giving magnesium sulphate high enemata and fluids Colic may be controlled by morphine and atropine In accordance with the Aub method of treatment the lead is transformed into a relatively inactive state by mobilizing it into the bones from other tissues in the body This is possible because lead follows the deposition of calcium and a positive calcium balance favors the storage of lead The patient is given a quart of milk and 2 grams (60 grains) of calcium lactate or gluconate daily until the acute symptoms subside After the lead has been stabilized thus a diet low in calcium is adminis

Carbon Monoxide

Poisoning from carbon monoxide due to inhalation of coal gas or motorcar exhaust is seen commonly, especially since it is a frequent method of suicide The combination of carbon monoxide with hemoglobin is extremely stable and causes an anoxemia A concentration of 0 01 per cent produces symptoms of poisoning after a few hours, one of 0 1 per cent produces unconsciousness and acts fatally within a few hours, one of 1 per cent or even less is capable of producing apoplectiform death Small animals and children are more sensitive than adults The combination with 20 to 30 per cent of the hemoglobin of the blood produces easy fatigue, severe headaches and some clouding of consciousness, 60 per cent or more produces unconsciousness and, if exposure is prolonged, death With extreme exposure the nerve cells undergo degeneration If less concentrated mixtures are inhaled, the heart beats faster to compensate for the anoxemia and may undergo fatty degeneration Fatty degeneration may also take place in the cerebral capillaries (Mott) Carbon monoxide poisoning may cause a symmetrical softening of the lenticular nuclei, especially the globus pallidus with a resulting syndrome of paralysis agitans or catatonic rigidity Other constituents of coal or exhaust gas may cause a severe toxicity

Symptoms of acute poisoning are headache vomiting, lethargy and occasionally acute excitement, which may be followed by delirium or coma Physically, one finds fixity of facial expression, lips of cherry red color, generalized muscular rigidity, occasional tremors generalized hyperreflexia and an ataxia of weakness Spectrum analysis of the blood for carbon monoxide gives a quantitative appraisal of the severity of the poisoning Death may ensue within a week, or there may be a delayed recovery It is important to remember that apparent recovery may be followed after several weeks by severe symptoms of the chronic type These chronic symptoms may be both neurological and psychiatric Tremors pains aches pareses, paralyses and speech disturbances are common Apathy disorientation, bewilderment, and impairment of attention and memory are prominent Confabulation may be present

The prognosis for actute poisoning is good, if proper *treatment* is given promptly, and if too large a proportion of hemoglobin has not been combined with the carbon monoxide Recovery of function is improbable if chronic symptoms are in evidence since the central nervous system damage is irreparable In acute poisoning mixtures of oxygen

complex including parenteral injections of thiamin hydrochloride He soon quieted down and on Nov 14 was mentally clear rational and oriented

Atabrine psychoses usually start after the fever caused by malaria has subsided and no more parasites are found in the blood The onset usually is sudden but it may be gradual preceded by a short period, one day or less of nervousness malaise restlessness or insomnia The psychosis develops in most cases to a climax in one day or less remains at its height for a variable length of time and is followed by rapid recovery when the drug is withdrawn the outcome of atabrine psychosis is almost invariably complete recovery if it is recognized as such

There are two main theories regarding the pathogenesis of atabrine psychosis (1) Atabrine destroys trophozoites faster than quinine and therefore, may liberate malarial toxins in large amounts Thus this psychosis would actually be a cerebral type of malaria (2) The toxic effect on the brain may be due to the toxicity of atabrine itself similar to that of the scopolamine group of drugs or the encephalitis virus

The etiological factor responsible for atabrine psychosis probably is to be found either in an individual hypersensitivity to the drug or in some cases in constitutional psychopathy Toxic damage to the central nervous system caused by malaria seems to be a contributing factor The effect of overdosage of the drug remains debatable Pathogenesis of atabrine psychosis may be determined by hypersensitivity of the drug and its specific toxic effect on brain tissue previously sensitized by the malarial infection

The incidence of atabrine psychosis in Gorgas Hospital was 0 39 per cent of all atabrine treated patients or about one out of every 250 so treated It appeared to be moderately higher with estivo-autumnal than with tertian malaria

Prevention of atabrine psychosis consists of recognizing that a certain few persons are probably hypersensitive to the drug The dosage should rarely exceed 4 0 gm in one course of treatment especially when the therapeutic effect can be obtained with a lower dose Parenteral in particular intravenous administration should be limited to cases in which therapeutic results cannot be obtained otherwise or the therapist may switch to the use of quinine For *treatment* high doses of vitamin B preparations and forced intake of fluids are recommended Prognosis is favorable with few exceptions No chronic mental ailment has been observed to develop from this condition

tered in addition to substances which tend to change the pH of the blood, i e acids, acid-forming salts or alkalies Dilute phosphoric acid 20 c c (1½ drams) in water 10 times a day or 20 to 40 gms (300 to 600 grains) of sodium bicarbonate daily are recommended (Webster, 1930)

The various medical and neurological complications, which may arise during the course of the disease, should receive regular medical care The mental manifestations are in part personality-determined Prevention of industrial hazards is the most important aspect of treatment For other details of lead poisoning see Vol IV, Chapt XVIII B

Atabrine

The development of troops throughout the world in the recent war necessitated massive anti malarial measures The most efficacious of these was atabrine It must be admitted that atabrine was quite effective and had a relatively low total over-all toxicity Mental disorders following treatment with the drug were described as early as 1933

Sheppeck and Wexberg[69] reported a series of 19 cases of atabrine psychosis observed from 1935 to 1943 in Gorgas Hospital Prior to this publication it was probably justified to consider that about 50 cases of atabrine psychosis previously had been reported on It is apparent that the neurological after effects of treatment with atabrine are less frequent than the psychoses

To illustrate the clinical picture of atabrine psychosis, a typical case is reported in brief as abstracted from Sheppeck and Wexberg

A 36 year old white American male was admitted to Gorgas Hospital on Nov 5, 1942 with mixed tertian and estivo autumnal malaria He was placed under atabrine therapy and given 0 2 gm of the drug intramuscularly followed by the oral administration of 0 1 gm three times a day On the night of Nov 12 after an intake of 2 gm of atabrine in six days he suddenly became confused irrational resistive and would not stay in bed He still had fever on that day however the last time that the parasites of estivo autumnal and tertian malaria had been found in his blood was five and four days respectively prior to the outbreak of his psychosis The following morning he beame noisy excited and talkative and began throwing bedside articles about the ward It became necessary to put him in a seclusion room Atabrine therapy was discontinued immediately and he was placed under treatment with quinine increased intake of fluid and high does of vitamin B

As a prophylactic against pneumococcic streptococcic and meningococcic infections 25 000 men and women were each given a single dose of 2 gm of sulfadiazene during a five day period during Dec 1943 in the military service by Lee[31] Thus an unusual opportunity was furnished for observing sulfonamide reactions After 2 gm of sulfadiazene were administered 0 50 per cent of the patients showed reactions 063 per cent showed serious reactions and three patients were critically ill The remarkable feature of these three cases that were critically ill was the high fever and the mental state which ranged from coma through delirium to mild confusion Vilter and Blankenhorn[8] studied 1 936 patients in the medical wards at Cincinnati General Hospital that had been treated with sulfathiazole sulfadiazene sulfapyridine sulfaguanidine and succinylsulfathiazole They found the usual common reactions such as nausea and vomiting hyperpyrexia rash generalized edema lymphadenopathy renal calculi and blood dyscrasias Polyneuritis which was usually asymmetrical was not too uncommon It was felt that the polyneuritis must be due in some way to the nutritional states of the patient in the hospital It had its onset with pains burning numbness or tingling that occurred as early as the seventh day of treatment and perhaps as late as six months after a course of the sulfonamides When the onset of peripheral polyneuritis occurs during the treatment with the sulfonamides the necessity of treatment must be weighed against the possibility of a persistent neuritis after recovery Thiamin chloride has not cured or prevented this form of neuritis Some of the patients developed neuritis while receiving brewer s yeast thiamin and liver extracts In others vigorous treatments with vitamin and diet may have prevented the neurities from becoming worse

Delirium is difficult to attribute directly to the sulfonamides since it occurs so frequently in febrile disorders however its appearance is not uncommon As a rule it occurs in association with other toxic manifestations of the drugs particularly renal complications Delirium promptly disappears after the discontinuance of the particular sulfonamide in use

Toxic Reactions Associated with Somatic Diseases

The manifestations of a disease process vary in different persons even though the causes are similar Typhoid fever, for example runs a different course in a healthy robust young male than in a hypochondri

Sulfonamides

Although few individual physicians treat enough patients with sulfonamide drugs to make the risk of fatalities approach certainty within periods of one or even several years, every physician using sulfonamide drugs runs some risk of observing such a fatality among his own patients The serious problem presented by the combination of great therapeutic value with definite toxic hazards must be faced by the profession

The frequency of fatal sulfonamide toxicity makes it necessary to consider the possibility of reducing their numbers Measures are being actively sought to avoid serious toxic reactions but so far with little success It seems possible, however, that the use of less drug in each case will prevent the occurrence of some reaction Emphasis of early diagnosis of susceptible infections and early treatment with resulting more rapid and more complete therapeutic effects is the most desirable method of decreasing the amount of drug needed in each case It is not advisable to change standard dosage schedules which are known to be successful, since they are based on experimental demonstrations of the necessity of certain minimum blood levels of the drugs for maximum therapeutic effects

Even after the onset of toxic symptoms measures may be taken to reduce the number of fatalities Early recognition of toxic symptoms, followed by prompt cessation of drug therapy, is of considerable importance Symptomatic therapy such as transfusion in blood dyscrasias, alkalization of the urine in hemoglobin nephrosis and instrumental relief of gross urinary tract obstructions may also save some patients but symptomatic therapy can only be partially successful, and some fatal toxic reactions will continue to occur It is to be hoped that biochemists will develop therapeutic agents which are less toxic or devise ways of lessening the toxic effects of the present drugs, penicillin and similar antibiotics rapidly are accomplishing this

The frequency of fatal sulfonamide toxicity makes it necessary to consider whether the beneficial results of sulfonamide drug therapy are sufficient to justify a continued use of these drugs as now practiced It is felt without a doubt that the benefits derived from the use of sulfonamides, when they are not satisfactorily replaceable by other antibacterial preparations are much greater than the risk of serious toxic reactions incurred

longed treatment Delirium tremens schizophrenia and manic depressive psychoses may be precipitated by an acute infection

Postinfectious psychoses may arise subsequent to any infection, they differ from the psychoses with infectious diseases just described in that delirium is not a prominent symptom Easy fatigability loss of strength lack of attention and concentration irritability paranoid trends, anxiety hypochondriasis and depression are characteristic of the postinfectious psychoses The patient is excessively sensitive to stimuli of all types and tends to interpret all of the factors of his environment in the worst possible way If there is sufficient organic damage, neurological and far reaching mental changes are apparent

Exhaustion deliria is the name given to the delirious like reactions not due to infection or well recognized somatic disease They may be associated with extreme exhaustion from any cause The physician should make this diagnosis only after the exclusion of all other possible causes

The *treatment* in all of these states must be directed against the noxious agent If none can be found one must consider the possibility of psychogenic delirium epileptic clouded states drug ingestion or catatonic stupor General treatment measures are summarized on earlier pages

Endocrine Dysfunction

The various endocrine dyscrasias may be complicated by delirium but again no specific type of delirium is characteristic of any one of these disorders A possible exception to this rule is the delirium which may arise subsequent to gonadal involvement This state is marked by its sexual content and frequent paranoid ideas

Pellagra

Pellagra and pellagra like states develop insidiously over a long period of years with remissions and recurrences in persons who are deprived of the specific vitamin G(B) In addition other complicating factors may be necessary to produce the disease This avitaminosis may be found in those who undergo voluntary or enforced dietary restrictions such as chronic alcoholism and reducing fads The associa

acal debilitated female Likewise, in the case of psychiatric problems arising in the setting of somatic disease, it is impossible to describe any fixed symptoms course of events, prognosis and specific treatment rules In general, the psychoses associated with somatic disease are of a delirious type The principle facts relative to deliria have been discussed rather fully in preceding pages, but certain details concerning deliria associated with somatic disease are outlined below It should be emphasized again that the personality and environment of the patient play a more important role in determining the development and clinical course of such a psychosis than does the specific somatic disease

Febrile Diseases

Delirium may occur during the course of any infectious toxic or febrile diseases even though they do not primarily involve the nervous system The following factors may play a part in the development of the delirium, (1) physical exhaustion, (2) metabolic products of this exhaustion which act as a toxin, (3) toxins produced by the infection, (4) insufficient oxidation in the central nervous system, (5) inadequate removal of the waste products of metabolism, as in uremia (6) endocrine imbalance, as in thyroid disease and diabetes (7) dehydration The infectious diseases in which delirium is common are pneumonia, small pox, typhoid, typhus, influenza scarlet fever, acute rheumatic fever, chorea, malaria particularly the chronic type, acute encephalitis and the meningitides Deliria also are common following extensive burns deep lacerations and bone injuries

In most of these conditions there is no definite time relationship between the delirium and the onset of the fever Thus we speak of prefebrile, febrile, and postfebrile deliria *Prefebrile deliria* develop before fever is evident during the incubation or prodromal period of influenza malaria typhus and small pox They are of infrequent occurrence and vary from mild confusion in a dreamlike state to great motor restlessness *Febrile deliria* often exhibit symptoms proportionate to the height of the fever All grades of confusion disorientation, hallucinations excitement, stupor, mutterings subsultus tendinum carphologia and coma may occur *Postfebrile deliria* may be a continuation of the febrile deliria or may be due to exhaustion

Ordinarily the prognosis of the acute infectious deliria is good In some cases an underlying psychosis is uncovered which requires pro

In heart disease with failure of compensation especially acute failure extensive physiological changes take place and one of the most important is deficient cerebral circulation Various mental changes arise secondary to this circulatory disturbance These mental changes seem to have no specific relation to the heart disease but are expressions of the indirectly damaged nervous system The acute symptoms are roughly proportional to the amount of damage, gradual damage may bring about anxiety or depressive states with specific coloring from the underlying personality characteristics Not uncommonly current conflicts come to the fore Dream like states confusion, disorientation, misidentification memory and retention difficulty mood changes delusions of all types hallucinations fear and stupor may be present

Cardiorenal Disease

Delirium due to cardiorenal disease usually appears in patients over 50 years of age with definite signs of diffuse vascular involvement Accompanying this condition there are progressive impairment of memory retention and recall inability to calculate and depressed mood If decompensation occurs suddenly acute delirium may follow Apprehension fear confusion restlessness delusions and hallucinations appear in acute uremia Chronic uremia may cause either a simple drowsiness with emotional blunting or mood changes ideas of reference and persecution suspicion and anxiety all of which reflect the underlying personality

Puerperal States

Close analysis of these cases shows that they fall into regular reaction types of mental disease and that no distinct clinical designation is necessary Any psychosis may follow childbirth the etiology of such a psychosis is the same as it would be under other circumstances and the strain of childbirth may be considered simply an added burden to the susceptible patient

Hyperthyroidism

The varied psychiatric manifestations of Graves syndrome are dependent upon a characteristic hypersensitive and emotional constitution which often is familial and may be related to the thymicolymphatic

tion of pellagra with Korsakow-like syndromes has been mentioned above In addition epileptics on a ketogenic diet, impoverished persons and inmates of jails and asylumns are subject to the condition

In the later stages of pellagra it seems probable that actual changes in the cells of the central nervous system exist Pentscheu, 1928, studied the microscopic changes of the nervous system in this condition He suggests that there is a toxin formed which has a special affinity for injuring blood vessels and that mental symptoms begin to appear when the vessels are sufficiently damaged to interfere with their function as a hemato encephalic barrier As a consequence the toxin escapes into the brain tissue On the other hand certain biological evidence which is being adduced indicates that vitamin G is closely related to certain oxidation pigments (Kuhn, Gyorgy, Wagner-Jauregg), and that some substance closely related to vitamin G is necessary for carbohydrate metabolism (Pi-Suñer Bayo and coworkers) If these findings are true, the changes in the nervous system which are the result of vitamin G avitaminosis depend upon various metabolic dysfunctions The neurological signs of pellagra are those of a combined sclerosis of the spinal cord with vertigo, muscular weakness, ataxia, tremors, pains and variable deep reflexes

There is nothing especially characteristic about the metal syndrome Symptoms vary from memory and concentration difficulty, irritability and mild confusion to extreme disorientation, confusion, excitement, or deep depression Delirium with fanciful hallucinations often is present With severe damage to nerve tissues retardation and stupor are present, and the condition terminates in dementia and death

Treatment consists of a diet rich in vitamins, especially vitamin G (B) Yeast eggs milk and cream fresh fruits, green vegetables fish lean meats and cod liver oil are administered and liver is very valuable For other discussion of pellagra in these relationships see Chap X in Vol I and Chap XIII in Vol IV of Oxford Medicine

Heart Disease

In cardiac deliria a vague but profound type of fear and apprehension accompanied by shadowy visual hallucinations are the usual features Over-digitalization occasionally seems to play a precipitating role in such states, more frequently in individuals over 40 years of age

evidence to show that these reactions are specific for the particular condition concerned However that fundamental neurological changes occur is recognized Goldhamer and associates 1934, noted spinal cord changes in 89 - per cent and cerebral symptoms in 64 per cent of a series of 461 cases of pernicious anemia The onset of mental symptoms is variable and may occur even before the typical blood picture is present There is no apparent correlation between the degree of anemia and the intensity of the mental symptoms These symptom vary greatly according to the organic damage present and the character of the patient They consist of all degrees of confusion disorientation memory failure mood changes delusions and hallucinations The picture may be one of acute delirium or it may mimic any reaction type Consequently careful differentiation is necessary to exclude these other reactions In treatment antianemic therapy does not remedy specific cord damage but does help mental symptoms indirectly by improving general health Genitourinary infections pneumonia trophic ulcers and other complications usually bespeak a poor prognosis

Diabetes Mellitus

Toxic states associated with and presumably due to diabetes are quite uncommon It is certain that this group represents but a small percentage of the number of cases in which diabetes and mental disease are associated Other psychoses which may arise in diabetes cannot be considered specific for this condition The clinical signs of a toxic state in a diabetic patient include confusion, disorientation impaired memory inability to concentrate hypochondriasis apathy and depression With routine antidiabetic treatment and good nursing care the prognosis is good for uncomplicated toxic states due to diabetes

Hypoglycemia incident to excess insulin intake may cause mental symptoms as discussed in the following section

Menninger states that in order to classify a toxic reaction as being due to diabetes the following criteria should be satisfied (1) the diabetes must have been present before the psychosis, (2) other essential causes for the psychosis must be absent (3) the psychosis must run parallel with the diabetes (4) through antidiabetic treatment the diabetes must improve and the psychosis recover

constitution The exciting cause of an active Graves' syndrome is often a psychic insult arousing fear The most common and most violent reactions are found in syntonic, hypomanic, energetic personalities Indeed the general hyperactivity, excitability, distractibility, irritability and anxiety common in hyperthyroidism may develop into a fairly typical manic excitement, or the reaction may be colored by perplexity agitation and depression Extreme cases may develop auditory and visual hallucinations and paranoid delusions The acute deliria with great restlessness disorientation and apprehension occurring in thyroid disease or after thyroidectomy are well known In these cases it is important to have a fundamental understanding of the whole personality since recurrences of the psychic symptoms indicate that the hyperthyroidism may be only an incidental manifestation of the underlying constitution or of a latent anxiety state However, anxiety states differ from the similar manifestations of hyperthyroidism in that the patient usually is fatigued and has restricted energy coarse tremors clammy skin, decline in pulse rate during sleep, diminished appetite and slight, if any elevation of the basal metabolic rate The *treatment* of Graves' syndrome consists in the removal of the exciting factor through surgery the environment should be controlled, both before and after operation to make life easier for the patient The treatment of the acute deliria, which may occur, follows those principles already outlined in the general treatment of delirια

Myxedema

The mental changes common in advanced cases of myxedema are dullness of comprehension slow thinking with difficulty in making associations poor recent and remote memory and impaired retention recall and ability to calculate Commands are obeyed slowly and with great difficulty The patients usually are lethargic and sleepy Articulation may be poor especially if the circumoral musculature is hypertrophied The mood may be placid or one of easy irritability Administration of desiccated thyroid is beneficial as a rule

Pernicious Anemia

Although characteristic delirious reactions have been said to accompany the chronic anemias especially pernicious anemia there is little

respectable person may become vulgar and obscene and a frugal conservative individual extravagant and grandiose On the other hand the symptoms may represent an accentuation of the normal constitutional make up Thus paranoid forms of senile deterioration may develop in persons who have always been suspicious and distrustful, and paresis may be of a depressed or manic type somewhat in accord with the patient's previous reaction pattern

(3) The affect is characterized by great lability and this results in emotional instability with marked fluctuations in the mood Thus the individual may exhibit almost mercurial changes from joy to sorrow and back again

(4) Mental changes are quite characteristic and result in a decline in the patient's business and intellectual efficiency The individual characteristically shows periods of confusion and bewilderment difficulty in relating events which he has observed fluctuations in his level of attention defects in orientation and retention impairment of memory and comprehension marked disturbance of judgment and even delirium

(5) A large percentage of these conditions is entirely preventable While this is obviously true in the case of the toxic reaction types it is equally true of most of the organic reaction types especially all forms of central nervous system syphilis

(6) The prognosis varies according to the reaction type but it is in general poor

Classification

In order to facilitate the discussion of the organic reaction types a classification is of value but because of the complex nature of the subject especially that relative to syphilis no rigid systematization is possible In the following classification of the main clinical syndromes no attempt has been made to include a complete list of the diseases in the organic reaction types

Organic Reaction Types

I Syphilis of the Central Nervous System
- 1 Parenchymatous Syphilis
  - *a* General Paresis
  - *b* Juvenile Paresis

Hypoglycemia

Mental symptoms are a conspicuous part of this syndrome Organic focal reactions with motor aphasia, apraxia, rigidity and emotional instability may predominate, other cases show manic attacks with excitement hysteroid reactions and confusional, dream like states These states are characterized by disorientation, failure of memory or automatism in which the patient loses conscious control and may wander, expose himself to danger or make senseless remarks Treatment is directed to correction of the cause of the condition and to protection of the patient

ORGANIC REACTION TYPES

Among the many psychiatric problems encountered by the general practitioner the organic reaction types are the most readily understandable In almost all of these conditions definite pathology is present, and this pathology if recognized gives the physician a tangible explanation for the accompanying personality changes In general the organic reactions are chronic being dependent on focal or diffuse, more or less permanent and instrinsic changes in the central nervous system Obviously, transition states may exist between the delirious and the organic reaction types Etiologically the latter are associated with organic toxins, metabolic disturbances syphilis arteriosclerosis neoplasm, trauma senility certain epilepsies eclampsia and organic residuals of meningitis and encephalitis While the clinical picture varies from case to case and the etiology and duration of the diseases differ the characteristic features of this type of disorder may be summarized as follows

(1) A definite organic change exists in the central nervous system This may be in the nature of nutritional disturbance, neoplasm inflammation or degeneration The motor and sensory reflexes are often disturbed and these disturbances may lead to derangements of speech and equilibrium and to difficulty in writing and walking Since organic changes do occur special laboratory and clinical procedures, such as study of eye grounds and visual fields examination of the spinal fluid and encephalography, are of value in diagnosing these conditions

(2) Personality changes are striking and are reflected both in the deterioration of ethical feelings and in the development of behavior patterns inconsistent with the individual s former habits For example a

psychiatric condition Therefore in order to diagnose and treat neurosyphilis successfully the general practitioner must have an adequate grasp of clinical neurology and psychiatry

Historically, knowledge concerning central nervous system syphilis has followed that of syphilis in general In 1740 Astruc in his book *De Morbis Venereis* spoke several times *of syphilitic lesions affecting the* functions of the nervous system Unfortunately John Hunter (about 1790) taught that the brain was not affected by syphilis and the weight of his authority markedly delayed the development of knowledge concerning central nervous system syphilis However in 1834 Lallemand presented a collection of syphilitic brains and as a result of this and contributions by numerous other workers the fact was recognized that syphilis can affect the central nervous system As early as 1822 Bayle presented an accurate description of general paresis which he termed 'chronic arachnitis Aside from his recognition of general paresis his work is of importance in pointing out the relation between brain pathology and mental disorder Work on general paresis was continued by Esmark and Jessen (1857) who first suggested that this disease was a result of syphilis and by Kjelberg (1863) who stated that it was always caused by syphilis Crueveilhier (1835 42) showed the relation between sensory disturbances and degeneration of the posterior columns in a case of tabe dorsalis studied before and after death Todd (1847) amplified the findings by differentiating incoordination and paralysis and by demonstrating that the incoordination was a result of the degeneration of the posterior columns The credit for the first systematic study of the etiology symptomatology diagnosis prognosis and treatment of tabes dorsalis (locomotor ataxia) belongs to Romberg (1840 57) Continuing the work on tabes dorsalis Delmare (1866) described the gastric crises connected with this disease Charcot (1868) amplified these studies and added descriptions of the arthropathies Argyll Robertson (1869) noted the rigidity of the pupillary reflex and Westphal (1875) observed the absence of the knee jerk Syphilitic involvement of the arteries was first described microscopically by Allbutt (1870) and this work was followed by that of Huebner (1874) who published a classical description of syphilitic disease of the cerebral arteries Some what later Virchow Fournier Charcot and others showed that hereditary syphilis was as capable of attacking the central nervous system as was acquired syphilis and that central nervous system syphilis resulted in various pathological changes connective tissue growth arterial dis

2 Interstitial (Cerebral) Syphilis
 a Meningeal (Syphilitic Meningitis)
 b Vascular (Arteritis and Endarteritis)
 c Meningovascular (Asymptomatic Neurosyphilis)
3 Spinal Syphilis
 a Taboparesis
 b Tabes Dorsalis with Psychosis

II Psychoses of Senility
 1 Senile Dementia
 2 Cerebral Arteriosclerosis with Psychosis

III Epidemic Encephalitis

IV Epilepsy

V Posttraumatic States

VI Miscellaneous Conditions with Psychosis
 1 Brain Tumors
 2 Huntington s Chorea

Syphilis of the Central Nervous System

Before the various psychoses included in the above classification are discussed individually a brief general consideration of central nervous system syphilis is presented It will be noted that certain forms of cerebral syphilis such as meningeal, vascular and meningovascular, which do not present typical psychoses have been included in the outline of the organic reaction types While it is true that the symptomatology of much of cerebral syphilis is largely neurological, the fact that practically all forms of this disease are accompanied by psychotic manifestations makes it important to point out the close relationship of these conditions to the more generally recognized organic reaction types Moreover because cerebral syphilis causes a series of pathological entities which tend to succeed one another with a good deal of overlapping in clinical manifestations, even a psychiatric consideration of cerebral syphilis must include some discussion of all of the major forms of this condition Likewise although tabes dorsalis is not usually considered in a discussion of the organic reaction types the psychotic manifestations which sometimes accompany this condition, make it necessary to give some consideration to this disease When neurosyphilis does occur the resultant disease picture may simulate any known neurological and

fifth from paresis Whatever the true incidence of neurosyphilis may be it is much higher than it should be since syphilis itself can be prevented Even should prevention fail the disease can be treated to the point of adequate biologic symptomatic and serologic cure and it is entirely probably that adequate early treatment of syphilis would largely prevent the development of neurosyphilis

Certain *laboratory tests on the cerebrospinal fluid* are of value in differentiating central nervous system syphilis from other conditions which give similar or confusing clinical pictures However the diagnostic value of these tests is not limited to the fully developed stages of central nervous system syphilis since spinal fluid changes appear very soon after the invasion of the neuraxis by the treponeme It is known that this invasion takes place during the secondary or even during the primary, stage of syphilis often many years before mental symptoms appear Since these laboratory tests are of such great diagnostic value in neurosyphilis the globulin value cell count Wassermann reaction and colloidal gold curve are discussed briefly in the following paragraphs

The *globulin* usually is increased in all forms of neurosyphilis When this increase parallels the lymphocytosis it is of diagnostic value Total protein is increased as a result both of increased globulin and of the lymphocytosis A lymphocytosis indicates the presence of an inflammatory process within the central nervous system and consequently is present in many forms of neurosyphilis Meningeal involvement may increase the normal count of five to ten cells to three hundred or more, whereas a vascular process due to syphilis may have no influence Tabes and paresis usually result in a moderate increase in cells Therapeutic procedures usually decrease the lymphocytosis of early syphilis and if this does not occur the individual may be considered a potential tabetic or paretic

The *Wassermann reaction* is a valuable test which is positive in a large percentage of both early and late syphilis During the secondary stage of syphilis the blood Wassermann is positive in 60 to 70 per cent of tabes and in 80 to 90 per cent of both cerebrospinal syphilis and paresis The spinal fluid Wasserman is positive in 50 to 70 per cent of tabes, 30 to 40 per cent of cerebrospinal syphilis and 100 per cent of paresis

The *colloidal gold curve* is altered in approximately 80 to 90 per cent of untreated cases of neurosyphilis This laboratory procedure

ease and degenerative processes Further evidence concerning the etiology of central nervous system syphilis was presented by Fournier, who stated that tabes dorsalis (1876) and general paresis (1894) were both of syphilitic origin These findings were corroborated by Kraft Ebbing in 1897 A long step forward was taken by Metchnikoff who proved the infectious nature of syphilis by transmitting the disease to apes in 1904 This work was closely followed by that of Schaudinn and Hoffman (1905) who discovered the causative organism in chancres and named it *Spirochaeta pallida* Eight years later Noguchi and Moore demonstrated the presence of spirochetes in the brain of paretics, and this confirmed the dictum, "no syphilis, no paresis" In 1906 Wassermann introduced the non specific laboratory procedure for determining the presence or absence of syphilis and Plaut (1908) applied this test to the spinal fluid This procedure has been of inestimable aid in the diagnosis of all forms of syphilis and in determining the status of the disease and the progress of treatment

Within recent years emphasis has been placed upon treatment, and a large amount of data relative to this phase of the subject has been obtained At the present time it appears that the medical profession is becoming more cognizant of the importance of syphilitic involvement of the central nervous system and is stressing the prophylactic effect of early and adequate treatment With reference to treatment the advances likewise have been obtained through a system of trial and error A detailed consideration of this history cannot be presented here, but of outstanding importance are the introduction of arsphenamine by Ehrlich (1909), the application of malaria by Wagner von Jauregg (1917) the use of tryparsamide by Lorenz (1923) and the recent therapeutic use of penicillin

The exact *incidence* of neurosyphilis is not known but this condition constitutes 15 per cent of all the diseases which affect the central nervous system Moreover approximately 25 per cent of all syphilitics* both treated and untreated develop some form of central nervous system involvement Three fifths of these neurosyphilitics suffer from diffuse meningovascular involvement, one-fifth from tabes and one

* Although syphilis has been rather intensively studied during recent years and a great mass of data relative to *this* subject has been accumulated we have no definite information as to the incidence of this disease in the general population This deficiency of information is due *in* large measure to the lack of an adequate system of registration of syphilis However *indirect* evidence as to the prevalence of this disease is revealed by the fact that 10 per cent of all tabulated necropsies show anatomical evidence of syphilis

later fulminating parenchymatous involvement As a result of these observations it has been suggested that a dermatropic strain of the causative *organism is responsible for* the severe skin reaction whereas a *neurotropic strain precipitates paresis* However there is insufficient evidence at the present time for the existence of such strains Many authorities believe that exogenous stresses such as alcohol head trauma and the intensity of civilized life are the precipitating factors Solomon has suggested that paresis develops as the result of any of the following causes an overwhelming invasion of treponemata into the central nervous system an inferior central nervous system barrier to the entrance of the organisms a lessened ability of the patient to produce immune *bodies* the accidental localization of the *organisms* deep in the central *nervous system tissue*

As will be *pointed* out below in the discussion under asymptomatic neurosyphilis paresis begins essentially during the early stages of syphilis However the disease itself is not usually recognized until the appearance of severe mental symptoms These usually occur 5 to 20 years with an average of 1 to 16 years following the initial lesion The incidence of paresis is variously estimated to be 0 to 5 per cent of all syphilitics The actual number of paretics in state hospitals for insane is from 8 to 10 per cent of the hospital population The fact that *paresis is more common in males and reaches* its *peak in the fourth* and fifth decades of life is dependent to a large extent upon the frequency of syphilis is young adult males However in this connection it is interesting to note that while paresis is seen four or five times as often in the male as in the female the incidence of systematic syphilis is only twice as great in the former It may be that some hormonal influence modifies the course of syphilis so that the female is partially protected against the development of paresis

Pathology — *Although the* pathology *of the brain varies* somewhat with the duration and intensity of the disease a fairly constant picture is present It is not unusual to find the dura adherent to the skull together with an internal hemorrhagic pachymeningitis The pia arachnoid is thickened and gives the impression of frosted glass This condition usually is more marked in or even sharply limited to the frontoparietal region The pia arachnoid usually is adherent to the underlying brain tissue from which it is stripped with difficulty Numerous subpial hemorrhages *likewise are noted* The *brain is generally shrunken* and at times weighs only 900 gm two thirds its normal weight The

depends upon an increase of protein in the spinal fluid and Moore states that the general zones of precipitation observed (paretic, middle zone and meningitic) depend upon the proportion of albumin and globulin in the protein A typical collodial gold curve of 5555543200 or an atypical one of 3455434000 is suggestive of general paresis The so called middle zone or luetic curve of 2233210000 or 1123210000 may be found in cases of vascular syphilis and tabes dorsalis The meningitic zone is characterized by precipitation in the sixth to the ninth tube with a resultant curve of 0001234432 At the present time the gold curve is used only as a supplementary test and is not relied upon to differentiate the various forms of neurosyphilis However, it is of definite value in paresis The test is not always indicative of neurosyphilis since other neurological conditions such as brain tumor, lethargic encephalitis, muscular atrophies and multiple sclerosis, may give a positive reaction No significance can be placed upon it in cases where a slight precipitation no higher than 2, is found

Of the 4 tests upon the spinal fluid which have been discussed only the Wasserman is pathognomonic of neurosyphilis The other changes discussed are indicative of meningeal irritation which may occur in other diseases In antisyphilitic treatment the cellular count is first influenced then the Wasserman reaction The colloidal gold curve and the globulin return to normal slowly, if at all

Parenchymatous Syphilis

General Paresis

General paresis is a chronic syphilitic degenerative meningo encephalitis which produces extensive serological changes widespread neurological findings and progressive mental deterioration The outcome is fatal unless the disease is modified by vigorous therapy

Bacteriologically general paresis is caused by the invasion of the brain by the *Treponema pallidum* One cannot speak with equal certainty regarding the factors which must be added to central nervous system syphilis to produce paresis Clinical evidence suggests that this form of neurosyphilis may owe its origin to the nature of the individual s reaction in the secondary stage of syphilis A severe skin reaction appears to protect the individual against the later development of paresis whereas a feeble skin reaction seems to predispose him to a

treatment the patient enters upon the terminal stage which is characterized by extreme mental and physical degeneration with ultimate death This stage can be postponed for an undetermined period of time if adequate treatment is given soon after the early symptoms appear Since the disease progresses as an entity and no sharp line can be drawn between stages we shall discuss the clinical manifestations as a whole The following mental and physical essential neurological symptoms are more or less characteristic of any case

The mental changes begin very early in the course of the disease and probably exist months and even years before the diagnosis is made In general the most frequent early changes are those involving the personality of the individual He appears different to his business associates and family who characteristically make excuses and explanations for this change Bunker found in an anlysis of seventy four male paretics that irritability was the earliest symptom shown Because the patient s consciousness is clouded he becomes confused and finds it difficult to comprehend those things which were formerly routine Other mental changes which appear early are bradyphrenia forgetfulness judgment defect and affective changes Mental changes which occur later in the disease represent a marked accentuation of the derangements already noted

The term *bradyphrenia* is used in this connection to denote a condition marked by the slowing of the mental processes and the impairment of the formation of ideas The patient loses his grasp on recent ideas which have not had an opportunity to be well associated with other ideas While these ideas which have been acquired recently disappear first those of long standing disappear later As the patient loses many of his ideas there is a tendency for the resultant blanks to be filled in with imaginings and fictions As the disease progresses the memory is further impaired and the individual becomes very forgetful This loss of memory makes severe inroads upon the patient s ability to earn a livelihood Important engagements are not kept letters are unanswered and even the main events of the patient s life are forgotten His efficiency gradually declines This decline is soon ascertained if he is an employee but it may escape detection for some time if he is an employer

Defective judgment is prominent and may lead to financial ruin as a result of poor investments absurd business transactions or errors in professional work There seems to be no end to the complicated difficulties

frontal lobes show marked convolutional shrinkage and atrophy; the convolutions are thinned and the sulci are widened. The sub-arachnoid spaces usually are dilated, especially over the cortex, to compensate for the loss of brain tissue. This fact can be well demonstrated by encephalography. Upon sectioning the brain the ventricles are dilated and a granular ependymitis is seen, especially in the fourth ventricle.

The histological picture as reflected in changes in the cyto-architecture of the cortex is very striking. Because of the destruction of the neurones which occurs throughout the cortex, there is distortion in the orderly arrangement of the cells and a consequent "wind-blown" appearance of the microscopic structure. This destruction is especially prominent in the second and third layers of the anterior portion of the frontal and temporal lobes, but other structures which may be involved are the putamen, the cerebellum and the pyramidal tracts and posterior columns of the spinal cord. Many forms of degeneration of the neurones are represented in the areas involved. There is also usually a marked increase in the number of non-neural or supporting tissue cells about the neurones. Some of these non-neural cells are the so-called rod or scavenger cells, proliferative forms of the microglia which often contain an iron pigment. This pigment is considered by many to be pathognomonic of paresis. Other cells are the astrocytes or glial cells which proliferate to form scar tissue. The pia-arachnoid is infiltrated with round cells, especially plasma cells and lymphocytes. The perivascular spaces of the blood vessels throughout the cortex show a similar infiltration. The blood vessels themselves undergo proliferative changes of the intima which result in the formation of many new anastomosing vessels. The white matter of the brain is also affected in that there is an atrophy of the association fibers.

Symptomatology.—The disease has been described as progressing in three stages, (1) prodromal, (2) fully developed and (3) terminal. The prodromal period may escape detection at the time of its existence and the significance of the symptoms of this period, insomnia, headache, dizziness, fatigability, transitory aphasia and paralysis, irritability, lack of concentration and memory defects, are often realized only in retrospect. While paresis can be diagnosed during the prodromal period the disease is not usually recognized until it is fully developed. The fully developed stage is characterized by further mental and neurological involvement which leads to marked personality changes, progressive mental deterioration and extensive neurological manifestations. Without

Cranial nerve involvement is not found as typically in paresis as in other forms of neurosyphilis The degree of optic neuritis and optic atrophy is slight compared to that in tabes dorsalis but it occurs in approximately one fourth of the cases The third fourth and sixth nerves may show some degree of impairment which leads to strabismus diplopia or ptosis The pupillary reaction is characterized by sluggishness or a total absence of the light reflex and the pupils themselves are unequal and irregular The absence of this reflex together with the *preservation of accommodation Argyll Robertson reaction is found in* about 75 per cent of the cases The ironing out of facial muscles is very characteristic and results in a rather expressionless simple minded appearance

Other changes of significance include the facial tremor especially the circumoral tremor and the tremor of the tongue A speech defect is very characteristic In the early stages it is marked by slurring in the later stages by the omission and transposition of syllables and by frank distortion The difficulty in articulation may be elicited by such test phrases as the electricity of the Methodist Episcopal Church around the rugged rock the ragged rascal ran third riding artillery brigade or truly rural In spite of great effort to repeat these phrases there is produced only a thick dysarthric uninflected jumble of sounds There is also a disorder in handwriting due primarily to the tremor of the hand In addition syllables are omitted from the written word just as they are omitted from the spoken word

The nature of the tendon and deep reflexes depends upon the degree of integrity of the spinal cord tracts and cortical pathways The tendon reflexes especially the patellar may be exaggerated diminished unequal absent or even normal Ataxia disturbance of station anesthesia sphincter dysfunction and positive Babinski and Romberg signs may all occur as a result of demyelinization of the cortical and spinal pathways due to *general paresis*

A fully developed case of paresis usually presents a certain clinical form superimposed upon the mental and neurological symptoms which have been described Four main clinical forms may be identified (1) simple dementia (2) manic or expansive (3) depressive and (4) agitated Other minor forms may occur such as paranoid and cyclic It must be emphasized that a diagnosis of paresis is not made upon these clinical presentations but upon the mental neurological and serological findings It is felt that these forms merely represent the manner in

that patients get into because of the loss of their critical faculty Closely related to this loss is the development of delusions of a varying and changeable nature These appear especially in the agitated and expansive forms of paresis and are of a megalomanic character To be a king Kaiser president Pope, God millionaire or even billionaire or sultan with millions of wives and children does not appear to be inconsistent to the patient even though he must seek financial relief Since few if any of these individuals have insight into the nature of their illness diagnosis and treatment often are dangerously delayed The fact that even the relatives of the patient fail to recognize the seriousness of his condition also contributes to this delay

The emotional reaction is one of great instability and is marked by sudden mood changes from irritability through joy, sadness, kindness anger, unreasonable happiness with optimism and pessimism with suicidal preoccupations All esthetic feelings are lost as well as ethical and moral concepts For example individuals, who before the onset of the difficulty were considered impeccable, now resort to bacchio and venere

The *physical symptoms* are of significance Of these the most disagreeable is probably headache which may be of long duration It is variously described as a binding pressure' or as a feeling of emptiness and dizziness The most important of the physical manifestations are the paralytic attacks which occur in approximately half of the cases Often the diagnosis of general paresis is not made until after such an attack These attacks are preceded by convulsions which may be either epileptiform or apoplectiform in nature If epileptiform they cannot be differentiated from those of idiopathic epilepsy The patient often may give a history of many such attacks, which resulted in temporary weakness and paralysis of the affected parts Following one or several such convulsions the patient may show evidence of mental deterioration and may even develop an 'epileptic personality" The syndrome of a series of seizures accompanied by rapid mental deterioration is sometimes called "galloping paresis' If the convulsions are of an apoplectiform nature they result in a more transient type of paralysis (monoplegia paraplegia hemiplegia) than is the case in other apoplectic strokes An aphasia which likewise is transient, often is associated with the above mentioned paralyses As in the case of the epileptiform convulsions the mentality of the patient often appears to suffer following the apoplectiform attack

diagnosis is facilitated by the presence of mental and neurological symptoms in addition to the characteristic serological changes

Within recent years encephalography has been utilized in the diagnosis of general paresis and has revealed some interesting data regarding the degree and distribution of cortical atrophy By this method the cerebrospinal pathways can be visualized There are characteristically found an internal hydrocephalus and a cortical atrophy which is indicated by an increase in the number of cortical markings especially over the frontoparietal region As a rule the more severe the clinical manifestations the greater is the cortical atrophy For example in that group of paretics which showed neurological and mental evidences of an advanced degree of parenchymatous changes encephalography revealed extensive atrophy of the frontal and parietal regions absence of the normal cortical pathways and marked hydrocephalus On the other hand encephalograms of paretics with rather mild symptoms showed a preservation of the normal cortical pathways and a small amount of atrophy However the possibilities of error in encephalographic technique have not been sufficiently recognized and may lead to errors in the interpretation of the films This misinterpretation may arise because of the presence of air in the subdural space instead of the subarachnoid space The presence of air in the former may be detected by (1) subtentorial air ( ) collapsed ventricles and (3) absence of convolutional markings in the presence of a collection of air over the vertex

Paresis may simulate almost any known neurological or psychiatric condition but differentiation is possible on the basis of careful clinical and laboratory study The most important conditions from which general paresis must be distinguished are the other forms of neurosyphilis especially the meningovascular types In the latter conditions cranial nerve involvement and gross neurological disturbances such as hemiplegia aphasia and the like usually are more pronounced than mental changes However meningovascular syphilis and paresis may co exist and this makes differentiation difficult The time at which symptoms appear is important in differential diagnosis symptoms which make their appearance within 2 to 5 years following the primary lesion are probably on the basis of interstitial syphilis and not general paresis The response to antisyphilitic drugs is suggestive of the type of neurosyphilis since meningovascular syphilis responds favorably both clinically and serologically whereas paresis shows slight improvement Other conditions which may be confused with general paresis can be differentiated

which the patient presents his psychosis, and that this same type of psychosis in the same individual might have been precipitated by some other stress or strain than syphilis

The simple dementia of paresis constitutes 25 to 40 per cent of the cases This particular form is the classical example of an organic dementia since it is characterized by a progressive deterioration of all the faculties of the mind Convulsive attacks are very common in this form Delusions agitation and anxiety, manifestations found in other types of paresis are absent in the simple dementia The prognosis is guarded

The expansive form, in which we shall include both the manic and grandiose forms, constitutes between 10 and 25 per cent of all cases of paresis This form is characterized by the patient's marked euphoria flight of ideas, hyperactivity delusions of grandeur, lack of critical attitude irritability and increased psychomotor activity In the milder form there is usually preservation of the personality and remissions in the disease In the more advanced cases mental deterioration is seen It was formerly believed that this type of paresis was most common but as has been shown already the simple dementia of paresis is most typical

The agitated form constitutes 10 to 25 per cent of the cases and is known to be more acute in its onset than other forms The characteristic findings are tense psychomotor activity, megalomanic delusions and a marked clouding of the consciousness

The depressed form constitutes approximately 25 per cent of the cases Its onset is slower than that of the agitated and expansive forms The findings are those of an affective depression marked by despondency and depressive somatic delusions of a horrible nature

Diagnosis—An early diagnosis is essential, if treatment is to be instituted before excessive damage has taken place in the brain If the physician has clearly in mind the relative values of the various signs and symptoms the diagnosis is not difficult The potential paretic may be recognized during the secondary stage of syphilis by means of repeated spinal fluid study and the diagnosis of paresis itself in the prodromal stage depends upon the examination of the spinal fluid The spinal fluid Wassermann is positive with small amounts of fluid, 0 05 to 0 10 c c in practically all cases of untreated paresis and a pleocytosis varying from a few to several hundred cells exists Globulin is present in all cases and the total protein usually is increased to several times its normal level A more or less typical colloidal gold curve is present The Wassermann test upon the blood is positive in 85 to 90 per cent of all cases The clinical

reported from England Sweden and South America In the United States Lewis at St Elizabeth s Hospital reported the first results in 19 4 This report was followed by those of Kirby and Bunker and various workers at the Mayo Clinic the Boston Psychopathic Hospital the Colorado Psychopathic Hospital and other institutions The treatment of paresis with tertian malaria probably is at its height at the present time and most observers believe that this type of therapy is superior to the older methods Malaria is being used also in syphilis in general in tabes and in cases of cerebral syphilis which are refractory to chemotherapy

Even though malaria is the treatment of choice in paresis there are certain important contraindications to its use In general any accompanying systemic diseases, which tend to deprive the body of its latent powers of regeneration must be considered a contraindication for malaria therapy, unless this debility can be successfully modified Accordingly malaria usually should not be given in the presence of diabetes nephritis hepatitis tuberculosis or severel cachexia of any type However quiescent tuberculosis is not always a contraindication if the case is carefully handled

Cardiac and aortic disease is a major contraindication to malarial therapy Where decompensation and other signs of heart failure are present malaria must be withheld Aortitis may be clinically demonstrated in 35 per cent or more of cases of paresis and in addition there are an even larger number of cases showing evidence of myocardial disease without decompensation Both of these groups are poor risks as far as malarial therapy is concerned Special methods and modifications of the usual technique must be employed if such cases are to weather successfully the strain of malarial therapy

It is generally useless to attempt malarial therapy in rapidly progressive or so called galloping paresis and in tabes with severe ataxia of long duration These cases not only do not respond favorably to such treatment but apparently they are even aggravated The treatment is also disappointing in juvenile paresis and in primary optic atrophy

A period of examination and care prior to inoculation with malaria is essential in order that the patient may be in the most favorable physical state The patient receives a complete physical examination including blood typing microscopic and chemical examination of the blood and urine and radiographic examination of the heart and lungs By this

from this disease on the basis of a history of syphilis and a demonstration of the essential mental, neurological and serological changes of paresis already described.

Treatment.—The present day methods of treatment of general paresis represent a state of transition from the old to the new or more correctly a combination of the old and new. Thus, the established methods of treatment with arsenicals and heavy metals plus pyretotherapy appear to be giving way to penicillin treatment with or without pyretotherapy. Penicillin therapy has not been employed for a sufficient period of time to render a final comparison with metal chemotherapy in the treatment of paresis. Certainly at the present date penicillin has not replaced entirely the use of metal chemotherapy. While the literature contains accounts of what appear to be excellent results, remissions in 30 per cent of the cases following treatment with malaria alone or with tryparsamide alone, it is known that an additional 5 to 10 per cent of cases are benefited by the combination of the two procedures. That penicillin combined with pyretotherapy yields better results than penicillin alone is not a settled question. For the present, then, whether metal chemotherapy or penicillin is employed, it would seem advisable to add some type of pyretotherapy to the treatment plan. Each of these forms of therapy will be given detailed consideration in the following paragraphs.

Malarial Pyretotherapy.—The idea of non-specific treatment in clinical psychiatry is not new. Hippocrates, Galen, Sydenham and others noted that diseases such as ague, typhus, typhoid, cholera, variola, erysipelas, scarlatina and chronic suppurations favorably influenced the course of general paresis. In more modern times tuberculin was used with benefit to about 50 per cent of the cases of early paresis treated. Studies continued with other substances such as relapsing fever, Besredka's typhoid vaccine, staphylococcus vaccine, malt, egg albumin, peptone and sodium nucleinate, with somewhat beneficial results. The application of malaria to cases of central nervous system syphilis, especially paresis, was introduced by Wagner von Jauregg in 1917, 30 years following his original observations. Nine cases of paresis were inoculated with tertian malaria. Four of these improved with complete remission and of these four, two remained well for at least eight and one half years, two of the nine cases developed incomplete remissions, two remained unchanged, and one died. Following these reports from the Vienna clinic similar treatment was tried in Hamburg and since that time the method has had world wide use. Uniformly good results have been

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means latent disease, which might lead to complications, is discovered. Any such disease is eliminated insofar as this is possible, and existing infections of the teeth, sinuses, skin, etc. are treated.

Tertian malaria, *Plasmodium vivax*, is used because it is the most benign form. Any of the several strains of this form may be used, as there is no difference in their therapeutic effect. At the beginning of the malarial attacks, the tertian pattern may be either somewhat irregular or quartan in type. Quartan malaria has been successfully employed in communities where large numbers of the populace are immune to the tertian form. It is especially valuable for negroes, since about 50 per cent. of these individuals are immune to the tertian forms. Estivo-autumnal malaria should be avoided in all cases, because numerous deaths have been reported from the use of this organism.

In large clinics with established therapeutic strains the inoculation is effected by the transmission from donor to recipient of 2 to 5 c.c. of citrated whole blood. Inoculation may be either intradermal, subcutaneous, intramuscular or intravenous, but the first two methods are said to favor the production of the tertian pattern. Moreover, the use of malarial blood which agglutinates the red cells of the recipient supposedly aids in the production of the tertian form. Reinoculation, using about 10 c.c. of blood intravenously, is necessary in about 7 per cent. of the cases. In certain cases, the use of larger quantities, 50 to 100 c.c. of matched blood is necessary in order to produce malaria.

The period of incubation varies from 1 to 20 days, depending somewhat upon the mode of inoculation, with an average of 3 to 8 days. If the patient does not demonstrate clinical malaria by the tenth day, an attempt may be made to provoke a "chill" by the use of adrenalin or alum intramusculary, small doses of typhoid vaccine intravenously, or reinoculation. The average patient remains ambulatory and receives a general diet during the preparoxysmal stage.

Two or three days following the inoculation, the patient may run a low grade irregular fever. This subsides within a few days and is followed by a "chill" which is marked by a sudden rise in temperature to 104° or 105° F. The temperature may remain elevated for 1 to 3 hours, during which time there are profuse sweating, severe headache, anorexia, malaise and even exhaustion. During the most acute phase of the attack, the pulse and the rectal temperature are taken every twenty minutes. Following this period, these observations are made every hour until the temperature falls to 101° F. and subsequently, every three hours.

Temperatures of over 106° F during the acute attack may be reduced with alcohol rubs colonic irrigations and tepid sponge baths Every effort is made to keep the patient covered and protected from drafts A fall in blood pressure accompanies the febrile period if the systolic blood pressure is between 90 and 70 supportive measures are indicated if below 70 cardiac collapse is imminent and the paroxysms should be interrupted at once All aline drinks are forced from the time of inoculation and especially during the febrile period A light nutritious diet is provided Since many patients are incontinent enemata are of aid in keeping these individuals clean Complete blood counts and urine examinations every other day and blood chemistry determinations twice a week are made during the course of the disease Isolation is advisable in localities where anopheline mosquitoes are prevalent However because the sexual forms of the malarial parasite tend to be eliminated by artificial passage of the plasmodium from patient to patient it is questionable whether malarial patients are capable of infecting the mosquitoes

It was formerly customary to allow the patient to have as many as 12 chills but excellent results are obtained by a shorter course of malaria As Wagner von Jauregg pointed out a long severe course is likely to defeat the aims of treatment by so debilitating the patient that his recuperative powers are irreparably damaged If a long period of malarial treatment is necessary two short courses separated by several months are preferable to a single long course At the present time 8 paroxysms are considered sufficient The prodromal fever is not included in this number nor are paroxysms which fail to reach a temperature of 103 F Many cases will respond with even fewer chills 3 to 4 and there should be no hesitancy in terminating the disease after a few chills if the patient is in danger After he has experienced the desired number of paroxysms the malaria is terminated by the oral administration of either quinine bisulfate or *quinine dihydrochloride 0 3 gram (5 gr) t i d The administration is continued until the blood is free from plasmodia* for at least 14 days In the event that some complication makes it necessary to terminate the malaria quickly 1 to 2 cc of a 1 per cent solution of quinine and urea hydrochloride is given intravenously provided that the patient is not sensitive to quinine* If he is sensitive to quinine

* The patient's reaction to quinine is determined by the intracutaneous injection of 0 1 cc of a 1 per cent solution of quinine and urea hydrochloride Sensitivity is shown by a marked urticarial wheal at the site of injection

neoarsphenamine may be used for the intravenous termination Unless an emergency exists quinine intravenously should be avoided

Among the newer antimalarials available atabrine (quinacrine dihydrochloride) or chloroquine (SN 7618) may be used These drugs are considered by many physicians to equal if not excel, quinine in therapeutic value Atabrine (quinacrine dihydrochloride) can be given as follows, 0 2 gm (gr 3) doses orally every 6 hours night and day for 5 doses (total 1 gm) followed by 0 1 gm (gr 1½) doses 3 times a day after meals for six days (total 2 8 gm atabrine in seven days) If the patient can not take or retain oral medication a 0 2 gm ampule of atabrine in 5 c c of sterile water may be given intramuscularly and repeated at intervals of 6 to 8 hours Oral medication should be resumed as soon as possible and continued 0 1 gm 3 times a day until a total (intramuscular plus oral) of 2 8 gms has been given

Chloroquine can be given orally 0 3 gm daily for 4 to 7 days or with 0 6 gm as an initial dose followed by 0 3 gm 6 hours later followed by 0 3 gm daily for 2 days

Following the course of malaria the patient should remain in bed for about a week in order to prevent myocardial damage He is placed upon a high caloric antianemic diet His appetite may be enhanced by the use of iron and 5 to 10 units of insulin twice a day, 15 to 30 minutes before meals Shortly following the course of fever, it is customary to administer neoarsphenamine, 0 3 to 0 6 gm every 5 or 6 days for 6 times This drug acts both as a general tonic and as an antimalarial agent Further chemotherapy is then instituted according to the method to be discussed later

Although malaria may be employed with relative impunity in the majority of patients, certain conditions may arise which require the immediate termination of the disease in order to safeguard the life of the patient The following conditions are considered definite indications for the termination of malaria continued hyperpyrexia symptoms of shock between chills convulsive seizures cardiac decompensation kidney damage as measured by a high and increasing level of total nonprotein nitrogen in the blood, severe anemia, broncho-pneumonia, acute splenitis stupor between chills sudden overwhelming increase of malarial parasites in the blood purpura hemorrhagica jaundice and cellulitis

The death rate from malarial treatment averages 13 per cent in all clinics which have reported upon this phase of the subject In our own clinic the death rate during malarial treatment is 6 87 per cent for 4 2

cases of paresis The higher death rates may be greatly lowered perhaps even to 1 per cent, if the cases are properly selected Moreover it is estimated that a careful selection of cases would increase the possibilities of complete remission approximately 10 per cent

The mode of action of malaria is a debated subject and some of the various theories advanced have been summarized by Moore as follows (1) The fever is detrimental to the treponemes Usually the number of organisms is reduced as a result of treatment however they have been found in paretics who have had 8 to 12 paroxysms Moreover clinical and serological improvement may occur in cases which have little or no temperature rise during malaria (2) There appears to be a marked stimulation of the reticulo-endothelial system especially the histiocytes and undifferentiated mesenchymal cells, in various organs including the brain *It is possible that these phagocytic cells may destroy the treponemes.* (3) It has been reported that the typical pathological picture of paresis in the brain is altered by malaria either in the direction of normality or in the direction of meningovascular syphilis However if the latter occurs, the resultant inflammatory exudate in the meninges and about the blood vessels is rapidly organized and reabsorbed and further cellular destruction of the cortex is prevented This modification of the *pathological changes is supposedly closely paralleled by a clinical improvement* Moreover, a shift to the meningovascular type of syphilis favors the immediate effective use of antisyphilitic drugs since the permeability of the capillaries is increased (4) It has been suggested that there is a forced drainage of treponemes from the nervous parenchyma along the perivascular channels into the subarachnoid spaces The organisms are then removed from the nervous system supposedly via the *pacchionian bodies*

It can be seen readily from the above discussion that the modus operandi of malaria is not clearly understood Whatever may be the method by which malaria brings about improvement in the nervous tissue, it is not effective in other tissues Syphilitic processes in the liver and cardiovascular system may persist following treatment with malaria and this fact emphasizes the importance of chemotherapy

Other Methods of Pyretotherapy—Because of the disadvantages of malarial therapy efforts are constantly being made to discover some *other efficacious method which will prove less troublesome and dangerous* Such agents as typhoid vaccine relapsing fever, rat bite fever protein shock, sulphur hot baths, diathermy and short wave radio have

been tried with some success, but their use is very limited Typhoid vaccine has a rather wide clinical use, but the results obtained with this method are less striking than those with malaria Its use is indicated when the patient has an immunity to malaria, or when malaria cannot be obtained or is contraindicated

At the present time the Kettering hypertherm is taking its place among accepted forms of hyperpyrexic treatment for general paresis The Kettering hypertherm is an air-conditioned cabinet for the artificial induction of fever It was designed by Charles F Kettering, Edwin C Sittler and Walter M Simpson and introduced at the Miami Valley Hospital, Dayton, Ohio It gives adequate and simple control of the temperature, humidity and velocity of the air With this apparatus it is possible to elevate and maintain the body temperature to any desired physiological level Paretics who receive this form of treatment, are given 36 hours of a 105° to 106° F rectal temperature, usually at the rate of two 3-hour treatments per week The advantages of this type of treatment are the ease and simplicity of administration, the elimination of hospitalization, a better regulation of the body temperature, a lessened danger of cardiac and respiratory failure and a lowered mortality In our experience at the Colorado Psychopathic Hospital results with the Kettering hypertherm have been slightly better than with therapeutic malaria This finding is confirmed also by the Cooperative Clinic Group of the U S Public Health Service [81]

Metal Chemotherapy —As has been intimated earlier, pyretotherapy plus metal chemotherapy or penicillin appears to be more effective than any one of the above agents alone If malaria is the type of fever used, it will be necessary to withhold metal chemotherapy until completion of the fever therapy However, if artificial fever therapy, e g, the Kettering hypertherm, is used, chemotherapy can, and should be, given concomitantly Clinical improvement resulting from such treatment may take place within the first few months but prolonged treatment is essential, if any permanent effects are to be obtained In no case should the duration of the treatment be less than 2 to 3 years If, at the end of this time, it appears that Wassermann negativity of the spinal fluid may be obtained, treatment should be continued until this has occurred and for 6 to 12 months thereafter On the other hand, if the spinal fluid reaches a stationary level short of Wassermann negativity at the end of 2 or 3 years, treatment may be discontinued, provided that careful and frequent follow up examinations are conducted Such chemotherapy as

an adjunct to pyretotherapy is of value in the treatment of paresis because it increases the chances of complete remission guards against relapses and aids in preventing the further progress of syphilis elsewhere in the body

Metal chemotherapy is carried out with the heavy metals such as mercury and bismuth and the arsenobenzol compounds such as arsphenamine neoarsphenamine and tryparsamide A representative treatment program with such drugs is as follows [22]

1 Fever therapy with malaria or artificial fever as outlined above
2 Tryparsamide weekly intravenous injections of 3 grams each for 20 weeks
3 Twelve weekly intramuscular injections of bismuth subsalicylate (0 6 gram) in oil given during the first 1 weeks of tryparsamide therapy
4 Then give 12 weekly intravenous injections of neoarsphenamine of 0 45 gram each
5 Repeat 3 and 4 by continuous plan for a minimum of three years
6 Complete clinical and serological check each six months
7 Patients should remain under observation during the remainder of their lives with annual clinical and serological check ups

Of the compounds mentioned above *tryparsamide* is probably the most important Since the clinical application of this drug by Lorenz L Lowenhart and co-workers in 1923 it has found wide application not only in the treatment of general paresis but in other forms of neurosyphilis as well It is a pentavalent arsenobenzol compound containing 5 per cent arsenic It is less toxic than the commonly used trivalent arsenobenzol compounds but its efficiency as a treponemicide is likewise comparatively low However it is more highly diffusible especially through the hematoencephalic barrier and in addition appears to have an affinity for the parenchyma of the central nervous system These two factors probably account for its effectiveness in the treatment of general paresis

Tryparsamide is thought to produce toxic effects occasionally upon the optic nerve hence it is contraindicated in cases of syphilitic optic atrophy In cases where optic atrophy is not already existent tryparsamide may be used safely provided frequent ophthalmoscopic and perimetric examinations especially with colors are made and the patient questioned in order that early symptoms of optic nerve involvement can be detected Symptoms of disturbance of vision partial amblyopia or

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evidence of contraction of the visual fields are indications for the immediate discontinuance of the drug Harrison has suggested that individuals who suffer from an arsenical dermatitis, are particularly prone to optic atrophy following treatment with tryparsamide

Penicillin Treatment —Early in 1943 it was discovered that penicillin was an effective therapeutic agent in the treatment of primary and secondary syphilis Penicillin was shown by Mahoney, Arnold and Harris[37] to be effective in the treatment of syphilis Preparations employed clinically were mixtures containing the sodium salt of penicillin and different amounts of other substances including pigments The work of Dunham and Rake[11] indicated that crystalline penicillin G had no effect on motility of treponemes and they concluded that penicillins other than penicillin G must be the effective therapeutic agent Subsequent work has not borne this out Stokes[77] mentions that a large portion of K fraction 'defeats the treatment of syphilis' "We assume and there is some experimental evidence in support that crystalline G will be the most effective of the recognized penicillins in syphilis" Present penicillin mixtures rate 75 to 90 per cent G, and relatively pure crystalline G is now available

McDermott and Nelson[38] studied the transfer of penicillin into the cerebrospinal fluid using dilution techniques of bio-assay and found that no penicillin was demonstrable in the cerebrospinal fluids obtained from 70 patients who had received penicillin in various dosage by parental routes The presence of neurosyphilis and in one instance tuberculous meningitis does not alter these results Approximately 0 02 unit of penicillin was demonstrable in the cerebrospinal fluid of the patients, who had received one or two intramuscular injections of 300 000 to 500 000 units of penicillin 3 to 4 hours previously At concentrations ranging from 0 078 to 1 25 unit of penicillin per c c of sèrum penicillin is diffusable through artificial membranes in vitro and into ascitic fluids in vivo Failure of penicillin to appear in the cerebrospinal fluid is not because it is bound to a high degree to nondiffusable elements in the serum It was felt that since the immediate results of intramuscular penicillin treatment of syphilitic meningitis and other forms of neurosyphilis were so promising that it was unnecessary to use the intrathecal route for the treatment of those conditions Investigation performed by Stokes and associates[81] at the University of Pennsylvania concluded that the sodium salt of penicillin was an effective therapeutic agent in the treatment of late syphilis It produced transformation symptomatically and serologically without reaction or even serious inconvenience to the patient,

which were equal if not superior to results obtained by long and arduous procedures involving the arsenicals and heavy metals In the three years since that work was published reports from numerous other reliable sources have piled up further evidence of the value of penicillin in the treatment of neurosyphilis Moore[4] states Clinically in all types of neurosyphilis penicillin appears to be superior to any form of metal chemotherapy Regardless of the type of neurosyphilis clinical improvement may be expected to the extent to which symptoms and physical signs depend on inflammation rather than on degeneration

Although there is presently a rather uniform agreement regarding the value of penicillin in the treatment of neurosyphilis there remains considerable difference of opinion as to adequate penicillin dosage and whether penicillin is adequate alone or should be combined with pyretotherapy Again quoting Moore[4] In certain relatively benign forms of neurosyphilis (asymptomatic acute syphilitic meningitis diffuse meningovascular neurosyphilis) penicillin alone gives satisfactory results In the more serious parenchymatous forms (paresis tabes dorsalis primary optic atrophy, nerve deafness) the combination of penicillin and fever from induced tertian malaria simultaneously administered may be superior both from clinical and laboratory standpoints to penicillin alone

Heyman[24] recommends penicillin in treatment of early neurosyphilis and late asymptomatic neurosyphilis provided adequate facilities are available for follow up examinations of the spinal fluid In late asymptomatic neurosyphilis penicillin does not replace fever therapy as the treatment of choice Weickhardt[67] concludes that penicillin alone in a total dose of 6 million units within 30 days is of definite therapeutic value in paretic neurosyphilis but until further experience is gained penicillin should be combined with malarial therapy in the treatment of paretic neurosyphilis On the other hand Koteen and associates[9] and Dattner and associates[f] indicate that penicillin as the sole antisyphilitic therapy may be adequate

Concerning the combined use of penicillin and pyretotherapy Eagle and co-workers[21] found that increased body temperature allowed an eight to ten fold decrease in total dose of penicillin necessary for cure of rabbits inoculated with Nichols strain of *Treponema pallidum* This work has not been confirmed in human beings

Penicillin has been employed in total dosage varying from 1 00 000 units to 20 000 000 units Rose and Solomon[8] treating 100 cases of late symptomatic neurosyphilis with 3 000 000 units penicillin plus pyretotherapy found it necessary to retreat 36 per cent of those cases

evidence of contraction of the visual fields are indications for the immediate discontinuance of the drug Harrison has suggested that individuals who suffer from an arsenical dermatitis, are particularly prone to optic atrophy following treatment with tryparsamide

Penicillin Treatment —Early in 1943 it was discovered that penicillin was an effective therapeutic agent in the treatment of primary and secondary syphilis Penicillin was shown by Mahoney, Arnold and Harris[3] to be effective in the treatment of syphilis Preparations employed clinically were mixtures containing the sodium salt of penicillin and different amounts of other substances including pigments The work of Dunham and Rake[11] indicated that crystalline penicillin G had no effect on motility of treponemes and they concluded that penicillins other than penicillin G must be the effective therapeutic agent Subsequent work has not borne this out Stokes[77] mentions that a large portion of K fraction "defeats the treatment of syphilis" "We assume and there is some experimental evidence in support that crystalline G will be the most effective of the recognized penicillins in syphilis Present penicillin mixtures rate 75 to 90 per cent G, and relatively pure crystalline G is now available

McDermott and Nelson[38] studied the transfer of penicillin into the cerebrospinal fluid using dilution techniques of bio-assay and found that no penicillin was demonstrable in the cerebrospinal fluids obtained from 70 patients who had received penicillin in various dosage by parental routes The presence of neurosyphilis and in one instance tuberculous meningitis does not alter these results Approximately 0 02 unit of penicillin was demonstrable in the cerebrospinal fluid of the patients who had received one or two intramuscular injections of 300,000 to 500,000 units of penicillin 3 to 4 hours previously At concentrations ranging from 0 078 to 1 25 unit of penicillin per c c of sérum penicillin is diffusible through artificial membranes in vitro and into ascitic fluids in vivo Failure of penicillin to appear in the cerebrospinal fluid is not because it is bound to a high degree to nondiffusable elements in the serum It was felt that since the immediate results of intramuscular penicillin treatment of syphilitic meningitis and other forms of neurosyphilis were so promising that it was unnecessary to use the intrathecal route for the treatment of those conditions Investigation performed by Stokes and associates[81] at the University of Pennsylvania concluded that the sodium salt of penicillin was an effective therapeutic agent in the treatment of late syphilis It produced transformation symptomatically and serologically without reaction or even serious inconvenience to the patient,

therapy and pyretotherapy using artificial fever or malaria, it is this writer's opinion that the best statistical study available is that of the Cooperative Clinic Group of the U S Public Health Service headed by O Leary[31] Their results are presented herewith

Clinical Results

"1 Under either method of fever therapy, the earlier in its course the paresis was treated the more favorable were the results of therapy

"2 The chances of clinical remission in patients with mild paresis were approximately one out of two intermediate paresis one out of four, and severe paresis from one to ten out of one hundred

"3 Clinical responses to either type of fever therapy were similar in patients with mild or intermediate paresis on beginning fever therapy However this similarity disappeared when treatment was administered to patients with severe paresis In fact the remission rates for patients with severe paresis treated and observed for the same length of time was one out of 100 with malaria as compared with ten out of 100 with artificial fever

"4 Treatment deaths were defined as due to treatment regardless of cause providing death occurred within three months of the fever therapy Under this definition the crude death rate was higher with malaria (1 %) than with artificial fever (8%) The more severe the paresis on beginning treatment with either type of therapy, the higher was the frequency of death Within each degree of involvement the crude death rate was higher under malaria than under artificial fever These differences in death rate by degree of involvement under the two methods of fever therapy were not statistically significant but as a series they all point in the same direction

"5 Approximately 90% of the total clinical remissions obtained under either method of therapy occurred by the end of the third year of treatment observation The degree of paretic involvement on beginning fever therapy influenced the frequency and the speed of expected remissions Clinical remissions were obtained from one to two years earlier in patients with mild than in intermediate or severe paresis

"6 None of the patients in whom clinical improvement was delayed until the 3rd year after beginning fever therapy at any

Subsequently another series[81] of 115 patients with symptomatic neurosyphilis were treated with 6 million units of penicillin plus malaria, following which only 15 per cent required retreatment Heyman's[1] preliminary observations on the use of total dosage of 4 million units of penicillin indicate that this dosage probably will produce an arrest of the neurosyphilitic processes in more than 85 per cent of the cases Stokes and co-workers[78] in 1946 advocated a single course of not less than 4 8 million units in not less than 7 5 days, given intramuscularly in saline solution every 3 hours around the clock, as the "best start and often an adequate total therapy for the majority of cases of neurosyphilis Observation should be carried over at least a year in the absence of convincing evidence of progression before the effects are evaluated and further measures adopted " More recently Stokes[77] has revised his total dosage upward up to 10 million units in symptomatic neurosyphilis suggesting that ½ this dose may be tried in early asymptomatic neurosyphilis The consensus of opinion favors total dosages of from 5 to 10 million units, using saline solutions in intramuscular injections of from 20 000 to 60 000 units each every 2 or 3 hours day and night until the total dose has been delivered

Attention is called to the fact that Herxheimer and therapeutic shock effects occur as in the use of arsenical chemotherapy when full doses of penicillin are given at the start of treatment It has been suggested that an opening dose of 500 units with gradual build up to the full dose is safer[9] Allergic sensitization reactions may occur also but are commonly not serious and are largely controllable by newer anti histamine compounds such as benadryl

To this point this section has dealt with treatment with penicillin of neurosyphilis in general Referring specifically to the treatment of general paresis it is the writer's opinion that the number of patients treated and the duration of follow up studies have been insufficient to establish the superiority of penicillin as a sole therapeutic agent It is strongly recommended that these patients be given the benefit of pyretotherapy in addition to penicillin therapy Follow-up examinations should be made every 3 months during the first year after treatment, every 6 months for another 2 or 3 years and yearly thereafter

Results of Treatment —Widely disparate reports as to the results of the treatment of general paresis are found in the literature Furthermore the criteria, which have been used for the estimation of the clinical status of the treated paretic make accurate comparison of the many results impossible Regarding treatment results with metal chemo

failure However since clinical success was not accompanied by completed reversal (blood and spinal fluid) in 52 % of the cases it follows that clinical success was not necessarily dependent on serologic reversal

Reversal of the spinal fluid was more important than reversal of the blood in indicating the chances of complete clinical recovery

3 In three fourths of the cases with clinical as well as serologic recoveries the clinical remissions preceded or occurred during the same year as the serologic reversal When the clinical remission preceded the serologic reversal it did so by an average difference of from 2 to 3 years In the remaining fourth of the cases in which serologic recovery occurred first an average of from to 3 years elapsed before clinical remission was obtained

Reports of treatment results with penicillin have yielded fairly uniform findings as far as serological changes are concerned These findings are rather similar for neurosyphilis in general without regard to the clinical type Reynolds[60] report is representative of these changes Improvement in the spinal fluid abnormalities generally was apparent As a rule the cell count and total proteins promptly became and remained normal Colloidal mastic and Wassermann tests gradually improved the improvement being well sustained The degree and rapidity of improvement could not definitely be correlated with (a) the penicillin dosage (b) the duration of symptoms nor (c) the extent of spinal fluid abnormalities More favorable results followed therapy with penicillin plus malaria than treatment with penicillin alone

Reports of clinical results following penicillin therapy have varied widely and results of individual clinical entities have been difficult to evaluate because most of the published reports have not separated the various types of symptomatic neurosyphilis Moore[44] cites the results of 188 cases of paresis and taboparesis treated by penicillin alone in the Cooperative Clinics He lists 59 per cent as improved and the remainder as unchanged or worse Gammon and Stokes[9] cite results based on mental status of 47 paretic and taboparetic patients They list 38 per cent as markedly improved 3 per cent as moderately improved and per cent unchanged or worse In a later paper Stokes[7] considers the symptomatic response good in 35 to 50 per cent of cases of paresis Weickhardt[87] treating 100 paretics 60 with penicillin only and 40 with penicillin plus malaria found no significant differences in the treatment results of the two groups Of the entire group 45 per cent remained hospitalized and led a parasitic existence although no patients were

time reached the remission stage Of 432 patients with clinical improvement during the first or second years after beginning fever therapy, 34% of those in whom clinical improvement was delayed until the second year subsequently achieved complete clinical remission

'7 Once a complete remission had been obtained, the chances of its being maintained under either method of fever therapy were 95 out of 100 In a total of 17 relapses, 15 occurred within 3 years subsequent to the year of remission Relapses were more frequent in severe paresis than in mild or intermediate paresis"

"Serologic Results

"1 Reversal rates for original positive spinal fluid and blood increase as the duration of treatment-observation increased

"2 Positive blood reversed more rapidly though not in greater proportion than positive spinal fluid The degree of spinal fluid abnormality on beginning fever therapy influenced the proportion of expected reversals

"3 In patients treated with fever plus chemotherapy the annual rates of spinal fluid as well as blood reversal were consistently higher with malaria than with artificial fever, but this difference was assumed to be due to the greater amount of chemotherapy (17% more) administered to the malaria patients Without the use of auxiliary chemotherapy there were no differences between the spinal fluid and blood reversal rates of patients treated with malaria and those treated with artificial fever

"4 Blood as well as spinal fluid reversal rates were at least twice as great with as without the use of auxiliary chemotherapy Among patients not treated with auxiliary chemotherapy 4-% of all spinal fluid reversals subsequently relapsed as contrasted to only 24% of spinal fluid relapses among patients treated with auxiliary chemotherapy

"5 Two thirds of all the relapses from spinal fluid reversal occurred within one year following the original reversal

"6 Negative blood serologic reaction did not indicate the status of the spinal fluid but persistently positive blood serologic reaction was indicative of positive spinal fluid reactions"

Relation of Clinical to Serologic Results

"1 Reversal of both blood and spinal fluid were associated more than twice as frequently with clinical success as with clinical

prognosis is poor because the present day methods of treating this disease are inadequate

Interstitial (Cerebral) Syphilis

Meningeal Syphilis

Syphilitic meningitis may occur at any stage of syphilis however it usually appears during the secondary stage or at least within the first five years following the primary infection The disease is characterized by the findings of any type of meningitis i e headache rigidity of the neck increased intercranial pressure and fever Various forms of syphilitic meningitis have been described such as acute subacute and chronic and in addition the special form of basal syphilitic meningitis It is questionable whether such a detailed classification need be made since the various forms all reflect an underlying involvement of the meninges and differ from each other only in the site and duration of the attack Because of this fact we may discuss these conditions under the general heading of meningeal syphilis

Pathology —Pathologically the meninges especially those at the base of the brain are attacked The involvement may extend along the perineural space so that the cranial nerves particularly the second third fourth sixth and eighth are affected The microscopic picture is characterized by a marked infiltration of the meninges with hematogenous cells mainly lymphocytes with occasional plasma cells and histiocytes This infiltration also extends into the blood vessels and extensive vascular changes occur in the chronic forms of meningitis Any changes which take place in the parenchyma are non specific and secondary to the vascular alteration Occasionally the meningitis may be due to a diffuse gummatous process Such a process usually involves both the meninges and the blood vessels and is commonly classified as meningovascular

Symptomatology —Physically syphilitic meningitis is characterized by vertigo vomiting nausea cervical rigidity and severe headache Generalized convulsions may occur because of meningeal irritation Neurologically the second third fourth sixth and eighth cranial nerves are often involved but the other cranial nerves may be involved partially or wholly individually or collectively

Numerous mental symptoms may be present Consciousness varies

bedridden or unable to walk, 24 per cent remained in hospital but were making satisfactory progress working at simple tasks under supervision they were considered useful hospital citizens, 27 per cent returned to their former place in society

In spite of the variability of the reports it is the consensus of opinion that the results from penicillin plus fever, many think penicillin alone at least equal and probably surpass the results with metal chemotherapy plus fever therapy

Prognosis — General paresis is a progressive disease which is fatal unless treated Very few cases live longer than 5 years after the onset of the mental symptoms, and the majority die within 2 years Complete spontaneous remission of a very brief nature occurs in 3 to 5 per cent of the cases and partial temporary remission in 5 to 15 per cent Routine metal chemotherapy alone gives little better results than no treatment except that a somewhat larger percentage of temporary partial remission results As has been noted above, the prognosis is considerably improved when malarial therapy is added to the routine metal chemotherapy regime

This seems also to be the case when penicillin plus pyretotherapy and perhaps even penicillin alone is employed Further clinical studies over a prolonged period of time are necessary before there is detailed information as to the permanent results of the modern treatment of general paresis

Juvenile Paresis

Juvenile paresis presents the same pathological changes and similar, though less severe clinical manifestations as general paresis The onset of the mental symptoms varies from the twelfth to the eighteenth year and is said to occur from the seventh to the fifteenth year following infection (in utero?) This onset may occur suddenly in convulsive attacks, epileptic or apoplectic, or gradually in an arrest of the child's mental ability In either event subsequent deterioration and dementia occur Emotionally there are instability and irritability The neurological signs and the serology are quite similar to those found in adult paresis Since the patient's personality is relatively undeveloped because of his youth the various types of the disease noted in general paresis are not seen nor are the psychotic manifestations so numerous Generally speaking, while the onset of the disease is more rapid than is the case with general paresis, the course of the disease is more gradual The

gitis with penicillin All of the cases became asymptomatic in a few days and the spinal fluid abnormalities promptly reverted toward the normal side The schedule of treatment advised by Nelson and Duncan for acute syphilitic meningitis is a total dose of from 2 to 3 million Oxford units of penicillin administered in divided intramuscular doses every 3 or 4 hours day and night over a period of from 8 to 16 days Follow up examination should be made every 3 months during the first year after treatment every 6 months for another or 3 years and yearly thereafter The response of acute syphilitic meningitis to penicillin may be illustrated by the following summary of one of Nelson's and Duncan's cases

Case (JHH 30811 5) A 21 year old Negro woman was admitted to the Johns Hopkins Hospital November 6 1943 A year previously she had developed intermittent diffuse headaches which ten months later had increased in frequency and duration and three days prior to admission had become constant and refractive to aspirin She vomited once on the day of admission Four months prior to that because of a rash on the lower surfaces of her forearms she had consulted her private physician who finding her blood serological test to be positive had given her 6 intravenous injections the last one three weeks before admission This treatment caused the disappearance of the rash but the headache did not improve There was *no history of earlier manifestations of syphilis*

Essential findings in the physical examination on the admission were a very stiff neck three diopters of papilledema on the right with a few small retinal hemorrhages and a slight papilledema on the left The skin and mucous membranes were normal and there were a few small superficial lymph nodes Visual fields were normal except for enlargement of the right blind spot Lumbar puncture revealed a spinal fluid with a ground glass appearance and initial pressure of 190 mm of water and contained 1 50 cells per c c of which 87 per cent were mononuclear and 1 per cent were polymorphonuclear and 100 mgm of protein per 100 c c Wassermann reaction was positive with 0 5 c c but negative with smaller amounts The gold curve was 55553100 Treatment was started with 10 000 Oxford units of sodium penicillin intramuscularly every 3 hours for 64 injections with *a total of 640 000 units in 7½ days The temperature throughout varied* between normal and 10 F Two days after treatment was started the headaches ceased and on the following day diminution of the papilledema was noted About one month later there was no papilledema About two months later the spinal fluid contained 37 mgm of protein per 100 c c but no cells were seen The Wassermann reaction was positive with 0 c c but not with 0 1 c c The gold curve was 5543100000 The spinal fluid abnor

from a delirious to a semicomatose condition Certain individuals may suffer from convulsive attacks Although a mild euphoria is sometimes seen a dull, stuporous state characteristically exists because of the increase in intracranial pressure However if a delirium is present it consists of an hallucinosis with fear, difficulty in comprehension and inability to focus the attention Early in the disease the patient may complain of being mixed up and unable to think, and this confusion may lead to disorientation for time and person There is usually a loss of memory for recent events The emotional reaction varies from excitement and irritability to anxiety and depression with suicidal threats The fact that the individual usually has some insight into his condition and recognizes his deficiencies indicates a preservation of the personality Individuals who suffer from convulsive attacks, may have a fixed gaze and a lack of facial expression which is suggestive of mental enfeeblement

The *prognosis* depends upon the age of the patient, an early diagnosis of the disease and the amount of treatment The younger the individual the less likely are arteriosclerotic complications Early diagnosis and adequate treatment usually result in a favorable outcome of the disease

Diagnosis —The diagnosis of syphilitic meningitis is based upon the following findings, a history of recent luetic infection a positive spinal fluid Wassermann a pleocytosis of the cerebrospinal fluid the absence of any pyogenic or pellicle-forming organism in the fluid an increase in spinal fluid pressure and other meningitic manifestations The onset is acute and is accompanied by headache and cranial nerve palsies Syphilitic meningitis may be distinguished from tuberculous meningitis by the Wassermann reaction, which is negative in the latter General paresis may be differentiated from syphilitic meningitis on the basis of the different clinical manifestations and the amount of time elapsing between the initial and the central nervous system involvement

Treatment —Although symptomatic relief sometimes is spontaneous and many of the cranial nerve lesions may disappear without treatment metal chemotherapy or preferably penicillin may be of great value in treating meningeal neurosyphilis Of all forms of symptomatic neurosyphilis acute syphilitic meningitis responds most promptly to the various types of antisyphilitic therapy in common use Nelson and Duncan [9] of Johns Hopkins Hospital working under the Office of Scientific Research and Development treated 10 cases of acute syphilitic menin

arteriosclerosis Marked proliferative changes characterize the involvement of the small vessels These changes result both in an excessive non functioning vascularization of the cortex and pia and in the diminution and occlusion of functioning vascular lumina Subsequently there are atrophy and softening of the parts of the brain affected

The most essential features of vascular syphilis arise from the indirect involvement of the pyramidal pathways and the cranial nerves and their nuclei These neurological involvements are the result of occlusion partial occlusion or interference with the contriction and dilatation of the blood vessels *Intermittent headache which supposedly becomes more severe with mental activity is a common symptom* Complete occlusion, especially of the larger vessels leads to a stroke with resultant hemiplegia monoplegia paraplegia or aphasia These manifestations are preceded by headache vertigo and disturbance in motor and sensory function A stroke may also occur following the rupture of an aneurysm of the vessels Temporary palsies atrophies loss of consciousness and mental confusion are the result of incomplete occlusion of the blood vessels *and the transitory nature of these symptoms is of importance* Generally speaking involvement of the smaller vessels produces less damage and leads to sudden attacks of delirium or stupor together with an inability to think mental fatigue and gradual intellectual and emotional deterioration The patient becomes irritable emotionally unstable and loses interest in his work and surroundings The clinical picture may suggest paresis All of the above mentioned symptoms may occur in all degrees of severity depending upon the location size and amount of involvement of the arteries concerned

Diagnosis —A condition of vascular involvement resulting in partial or complete alteration of motor and/or sensory function in an individual with a history of syphilis and a characteristic cerebrospinal serology is indicative of vascular syphilis A differential diagnosis between this condition and cerebral arteriosclerosis depends upon the age of the patient and a history of syphilitic infection

Treatment —Since no system of treatment instituted can be expected to restore nervous tissue which has been destroyed the best that can be hoped for in this type of disease is that the treatment may stay the pathological process and prevent further damage to the central nervous system Good results are reported in about one third of the cases treated as subsequently outlined but many other cases show signs of continued and advanced cerebral involvement even while under treatment

malities continued to regress and after discharge from the hospital she remained well

Subsequent reports indicate equally good results with penicillin

If one chooses to use metal chemotherapy, arsphenamine may be given in small weekly doses of 0 3 to 0 4 gm and increased to a maximum dose of 0 6 gm Bismuth subsalicylate should be given concurrently in intramuscular injections of 0 26 gm each Artificial fever therapy also may be given to advantage The extent to which these agents are used will depend upon the nature of the case Metal chemotherapy must continue until the patient's blood and spinal fluid remain negative for a year or failing this until he has been under treatment 2 to 3 years Regular periodic check ups should be made thereafter

To be kept in mind is the tendency of meningeal neurosyphilis to relapse Inadequate treatment may lead to more extensive involvement of the central nervous system

Vascular Cerebral Syphilis

It has long been recognized that when the treponeme invades the central nervous system the vascular tissue therein is attacked more severely than either the parenchyma or the meninges Symptoms of this vascular involvement may occur at any time following the original lesion but Gower states that approximately one fourth of the cases of vascular cerebral syphilis occur within the first two years As in the case of syphilitic meningitis it is questionable whether a detailed classification of vascular syphilis need be made The terms syphilitic arteritis, endarteritis phlebitis and endophlebitis are often encountered in discussions of vascular syphilis but these designations have reference to the kind and size of blood vessels attacked rather than to any specific type of involvement Certainly, definite psychiatric conditions cannot be correlated with the various pathological entities

Pathology —Pathologically there is marked lymphocytic infiltration which usually involves the large or medium sized vessels especially those at the base of the brain and this infiltration sets up a typical panarteritis The three layers of the vessel are involved in the process with a resultant fibrosis of the intima or formation of aneurysms In certain chronic forms fatty changes may occur in the media and the condition so closely resembles arteriosclersis that the question has been raised as to the role of syphilis in the production of so-called nonspecific

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syphilis Likewise certain other forms of meningovascular syphilis, such as gumma present an almost purely neurological problem

Among the conditions which may be related to meningovascular involvement is that of *asymptomatic neurosyphilis** This condition is of importance because of its relationship to the development of later manifestations of neurosyphilis It has already been pointed out that the treponeme invades the neuraxis very early in the course of syphilis According to Moore Invasion of the nervous system by the treponema probably occurs in all patients with syphilis and unless the course of the disease is influenced from without (by treatment), this takes place in most if not all instances within the first year after infection The immediate result of the invasion of the central nervous system is variable In some cases the neurosyphilitic condition may be of an acute nature as in the case of syphilitic meningitis in others the neurosyphilitic process may be almost without symptoms *The latter form is of importance because of the fact that if it remains unrecognized and untreated, it frequently develops into a severe meningeal or parenchymatous involvement*

While it is generally believed that this form of neurosyphilis exists without clinical manifestations nevertheless vague symptoms of many kinds may occur These are irritability nervousness, giddiness headache insomnia neuralgic or rheumatoid pains inequality and irregularity of the pupils, and exaggeration sluggishness or inequalities of the deep reflexes These symptoms appear early in the course of the disease and if their importance were recognized and adequate treatment were instituted many cases of the later devastating forms of neurosyphilis might be prevented However since these clinical manifestations usually are too indefinite and transitory to use as a basis for diagnosis the spinal fluid changes (cellular count globulin Wassermann reaction and colloidal gold curve) must be used as an index of the condition* The highest incidence of these changes occurs at about the eighteenth month following infection although they begin early in some patients Generally speaking the more severe the spinal fluid changes in asymptomatic neurosyphilis the greater is the likelihood of late extensive parenchymatous vascular, or meningeal involvement

Asymptomatic neurosyphilis really belongs to no pathological category

Since it is theoretically possible to infect the central nervous system by lumbar puncture in the early stages of syphilis this procedure should not be carried out in this stage until the fifth or sixth month of treatment

In addition residual disabilities may be noted in those who apparently have made a good recovery.

Before beginning treatment, it is important to make sure that the condition is not cerebral arteriosclerosis and that it is not one complicated by parenchymatous changes such as would be present if the vascular lesion were secondary to general paresis. The patient must be put to bed for the first few weeks to alleviate cerebral congestion and edema. Antisyphilitic therapy should not be too energetic nor intensive at the beginning and if cardiac pathology is present, particularly syphilitic disease of the aorta, treatment must proceed with utmost caution.

If one chooses to use metal chemotherapy, it is advisable to start with weekly injections of a heavy metal such as bismuth subsalicylate for 8 to 12 weeks. This is followed by a course of neoarsphenamine beginning with small doses (0.1 gm) which are gradually increased up to 0.6 or 0.7 gram. Treatment must continue for at least two years with alternating courses of neoarsphenamine and a heavy metal. Should the symptoms suggest a progression of the luetic process toward parenchymatous involvement, one must weigh the risk of instituting more energetic treatment as described under general paresis.

If penicillin is selected as the therapeutic agent, again it should be emphasized that therapy must be started with caution. If the patient has had no recent anti-luetic therapy the following penicillin schedule is suggested: intramuscular injections of 500 units every 3 hours night and day for two days; if no untoward reaction occurs, then increase the doses to 5000 units every 3 hours for 2 days, then increase to 10,000 units every 3 hours for 2 days, then continue at 20,000 units every 3 hours until a total of 6 million units has been given. Follow up examinations should be done as discussed in the treatment of meningeal syphilis. A more more energetic re-treatment may be required at a subsequent date.

Meningovascular Syphilis

Meningovascular syphilis may produce a combination or accentuation of the symptoms arising either from meningeal or vascular syphilis. The differentiation of these two latter forms from that of meningovascular involvement is a neurological and pathological problem which bears little relation to the strictly psychiatric implications of neuro-

Spinal Syphilis

Cases of tabes dorsalis with psychosis sometimes occur These cases may be of two general kinds (1) taboparesis and (2) tabes dorsalis with other psychoses

In taboparesis there are found certain cord changes indicative of tabes in addition to the mental changes characteristic of paresis This condition appears to be a true combination of tabes and paresis rather than one of general paresis in which the knee and ankle jerks are absent When such a combination of symptoms occur both the paretic and the tabetic symptoms often are less severe than is the case in either tabes or paresis alone Treatment of taboparesis is the same as that outlined above for paresis

In cases of tabes dorsalis with a psychosis different from that of the paretic type the mental deterioration found in general paresis is absent The mental symptoms may be either very mild and indefinite or less commonly those of a hallucinatory anxiety or paranoid state In the latter cases the patient suddenly becomes fearful and agitated and hears voices accusing him of numerous crimes The psychosis which accompanies tabes dorsalis is of indefinite duration and probably is merely a reaction to the situation of syphilis In other words, the patient s psychosis is precipitated by his knowledge of the disease and its handicaps On the other hand Grinker has pointed out that certain of the psychoses attendant upon tabes dorsalis may be due to a diffuse proliferative endarteritis In addition mild parenchymatous involvement secondary to the vascular probably occurs The treatment of tabes with a psychosis differing from paresis is the same as that for uncomplicated tabes dorsalis

Psychoses of Senility

The student who is familiar with Swift s masterpiece of satire Gulliver s [Travels will recall that occasionally on the island of Luggnagg a struldbrug or immortal was born At birth a struldbrug had a red circular spot on the forehead directly over the left eyebrow which was an infallible mark that it would never die The birth of such an individual was a public calamity since even though a struldbrug could not perish physically he was doomed to all physical and mental infirmities of advanced age In describing them Swift has incidentally, given us a remarkable picture of senile dementia

This is especially true if the spinal fluid abnormalities remain fast even under treatment

The type of treatment of early syphilis is very important in influencing the development of asymptomatic neurosyphilis and the ultimate outcome of the neuro-infection Irregular treatment of early syphilis increases the incidence of general asymptomatic neurosyphilis threefold and the incidence of asymptomatic neurosyphilis with maximal spinal fluid alterations tenfold Irregular treatment of late syphilis seems not to affect the incidence of asymptomatic neurosyphilis Inadequate treatment of early syphilis not only increases the incidence of asymtomatic neurosyphilis but it actually hastens the appearance of symptomatic neurosyphilis For example, inadequate treatment of early syphilis shortens the period elapsing between the initial infection and the appearance of general paresis from 19 54 to 15 32 years (Hopkins) In our clinic the period is shortened by 2 77 years

The effect of treatment upon asymptomatic neurosyphilis itself is dependent both upon the degree of changes, which are present in the spinal fluid at the time treatment is begun, and the type of treatment Generally speaking serological "cures" are obtained in inverse proportion to the severity of the existing spinal fluid changes As might be expected adequate treatment is necessary, since the results of inadequate treatment seem even worse than those obtained with no treatment For example inadequate treatment appears to enhance the development of parenchymatous neurosyphilis, especially in those cases of asymptomatic neurosyphilis with the most severe spinal fluid changes

The type and duration of the treatment of asymptomatic neurosyphilis is governed by the degree of changes in the spinal fluid The greater these changes the more intensive must be the treatment Penicillin has yielded rather spectacular results in the treatment of asymptomatic neurosyphilis and most workers indicate that penicillin without pyretotherapy is adequate In our own clinic we prefer to combine penicillin with pyretotherapy, if the spinal fluid changes approach a paretic formula

If metal chemotherapy is chosen the duration and intensity must be guided by the severity of the spinal fluid changes and their promptness in reversal If the spinal fluid changes approach the paretic formula it is recommended that pyretotherapy be added to the chemotherapeutic plan

SPINAL SYPHILIS

Cases of tabes dorsalis with psychosis sometimes occur These cases may be of two general kinds (1) taboparesis and ( ) tabes dorsalis with other psychoses

In taboparesis there are found certain cord changes indicative of tabes in addition to the mental changes characteristic of paresis This condition appears to be a true combination of tabes and paresis rather than one of general paresis in which the knee and ankle jerks are absent When such a combination of symptoms occur both the paretic and the tabetic symptoms often are less severe than is the case in either tabes or paresis alone Treatment of taboparesis is the same as that outlined above for paresis

In cases of tabes dorsalis with a psychosis different from that of the paretic type the mental deterioration found in general paresis is absent The mental symptoms may be either very mild and indefinite or less commonly those of a hallucinatory anxiety or paranoid state In the latter cases the patient suddenly becomes fearful and agitated and hears voices accusing him of numerous crimes The psychosis which accompanies tabes dorsalis is of indefinite duration and probably is merely a reaction to the situation of syphilis In other words the patient s psychosis is precipitated by his knowledge of the disease and its handicaps On the other hand Grinker has pointed out that certain of the psychoses attendant upon tabes dorsalis may be due to a diffuse proliferative endarteritis In addition mild parenchymatous involvement secondary to the vascular probably occurs The treatment of tabes with a psychosis differing from paresis is the same as that for uncomplicated tabes dorsalis

PSYCHOSES OF SENILITY

The student who is familiar with Swift s masterpiece of satire Gulliver s Travels will recall that occasionally on the island of Luggnagg a struldbrug or immortal was born At birth a struldbrug had a red circular spot on the forehead directly over the left eyebrow which was an infallible mark that it would never die The birth of such an individual was a public calamity since even though a struldbrug could not perish physically he was doomed to all physical and mental infirmities of advanced age In describing them Swift has, incidentally, given us a remarkable picture of senile dementia

This is especially true if the spinal fluid abnormalities remain fast even under treatment

The type of treatment of early syphilis is very important in influencing the development of asymptomatic neurosyphilis and the ultimate outcome of the neuro-infection Irregular treatment of early syphilis increases the incidence of general asymptomatic neurosyphilis threefold and the incidence of asymptomatic neurosyphilis with maximal spinal fluid alterations tenfold Irregular treatment of late syphilis seems not to affect the incidence of asymptomatic neurosyphilis Inadequate treatment of early syphilis not only increases the incidence of asymtomatic neurosyphilis but it actually hastens the appearance of symptomatic neurosyphilis For example, inadequate treatment of early syphilis shortens the period elapsing between the initial infection and the appearance of general paresis from 19 54 to 15 32 years (Hopkins) In our clinic the period is shortened by 2 77 years

The effect of treatment upon asymptomatic neurosyphilis itself is dependent both upon the degree of changes, which are present in the spinal fluid at the time treatment is begun, and the type of treatment Generally speaking, serological ' cures" are obtained in inverse proportion to the severity of the existing spinal fluid changes As might be expected adequate treatment is necessary, since the results of inadequate treatment seem even worse than those obtained with no treatment For example inadequate treatment appears to enhance the development of parenchymatous neurosyphilis, especially in those cases of asymptomatic neurosyphilis with the most severe spinal fluid changes

The type and duration of the treatment of asymptomatic neurosyphilis is governed by the degree of changes in the spinal fluid The greater these changes, the more intensive must be the treatment Penicillin has yielded rather spectacular results in the treatment of asymptomatic neurosyphilis and most workers indicate that penicillin without pyretotherapy is adequate In our own clinic we prefer to combine penicillin with pyretotherapy, if the spinal fluid changes approach a paretic formula

If metal chemotherapy is chosen, the duration and intensity must be guided by the severity of the spinal fluid changes and their promptness in reversal If the spinal fluid changes approach the paretic formula it is recommended that pyretotherapy be added to the chemotherapeutic plan

8 6 per cent of patients admitted to mental hospitals in 1933 suffered from this condition

Pathology — The pathological picture is characteristic of the condition According to Winkelman the brain is small the convolutions narrow and uneven and the fissures wide These abnormalities are especially marked over the frontal cortex The pia arachnoid is marked by thickened and somewhat hazy It shows a definite fibrosis with the presence of abnormal elements mainly gitter cells and detached mesothelial cells The ventricles are widened frequently giving the appearance of a hydrocephalus the sulci are filled with collections of cerebrospinal fluid The vessels especially those at the base of the brain are tortuous and sclerotic The cytology of the entire brain is characterized by (1) great decrease in the number of nerve cells (2) fatty changes, (3) atrophic changes and (4) Alzheimer s fibril change The cortical sections show definite atrophy loss of ganglion cells, increase in glial cells, and blood vessels with thickened walls This thickening is the result of a proliferation of the intima and a fibrosis of the adventitia In some places the vessels reveal a few fatty granules in their lymphatic spaces An excess of fat is present throughout the entire cortex not only in the parenchyma but in the interstitial tissue With Bielschowsky stain all stages of the characteristic senile plaques are visible in the cortex and the basal ganglia These plaques are formed by a degeneration of the nerve cells and a thickening of the glial elements In presbyophrenia and Alzheimer s disease the senile plaques are especially numerous and there is a marked destruction of the fibrils in addition to the other pathological changes noted above

Symptomatology — It is recognized that every one will show some regressive changes after he reaches maturity but individuals differ in the intensity and number of these changes The psychological alterations which occur are often considered to be dependent upon the normal aging of the tissues and the result of the physiological changes

Physically the individual suffering from senile dementia shows those changes associated with old age A prodromal period of many months may exist in which he sleeps poorly complains of malaise muscular weakness and anorexia In the fully developed disease the gait is shuffling tremor of the head and hands is marked speech is slow and difficult handwriting is shaky and clumsy, and headache dizziness and apoplectiform attacks may be present Restlessness and an aimless wandering which is most marked at night, are the reflection of the patient s

'When they come to fourscore years they were not only opinionated peevish covetous morose vain, talkative, but incapable of friendship, and dead to all natural affection which never descended below their grandchildren Envy and impotent desires are their prevailing passions At ninety, they lose their teeth and hair, they have at that age no distinction of taste, but eat and drink whatever they can get, without relish or appetite In talking, they forget the common appellation of things, and the names of persons, even those who are their nearest friends and relations For the same reason, they can never amuse themselves with reading, because their memory will not serve to carry them from the beginning of a sentence to the end and by this defect they are deprived of the only entertainment whereof they might otherwise be capable"

Nearly everyone is acquainted with some individual who could be described as above Such persons commonly have been regarded as annoying public charges but within recent years the gradual establishment of a psychiatric viewpoint is aiding in a better understanding of the aged Not all old individuals who have a mental disorder need to be institutionalized For example affective and toxic disorders are often present in these persons and following the removal of the precipitating factor, they regain their normal mental health Moreover, it is probable that many other senile individuals may be cared for outside of an institution Many European countries have found that the senile may be 'hospitalized in a private home which exercises adequate supervision over him Such a procedure is especially applicable to the simple deteriorated type of senile dementia However, the agitated and the paranoid forms of the disease require greater supervision than can be offered in a home

Senile Dementia

Senile dementia is a progressive mental disorder due to pathological old age and is characterized by defective mental functioning and by marked impairment of recent memory This disease arises from the brain destruction subsequent to old age and unknown pathological processes Toxic and hereditary influences may play a role in the etiology For example Meggendorfer finds a familial tendency and he believes that alcoholism favors the early development of the disease The greatest incidence of senile dementia is between the ages of 60 and 75, and

The underlying picture of senile dementia is essentially that which has been outlined above. However, certain features of the disease may be emphasized in different individuals and as a consequence senile dementia has been classified into various types. Each of these is discussed briefly in the following paragraphs. These types and their distribution are:

1	Simple senile dementia	50 per cent
2	Delirious and confused senile dementia	18 per cent
3	Depressed and agitated senile dementia	8 per cent
4	Paranoid senile dementia	16 per cent
5	Presenile psychoses	8 per cent
	a Presbyophrenia	
	b Alzheimer's disease	

Simple Senile Dementia.—Simple senile dementia offers no diagnostic difficulties. The general picture is essentially that outlined above but the symptoms of forgetfulness, narrowing of the patient's interest and nocturnal restlessness are especially outstanding. The following case presentation is illustrative of this condition.

L. J., 69 year old white female. The gradual onset extended over the last three years. The patient's relatives noted marked forgetfulness and the development of periods of confusion in which the patient wandered about the house during the night and imagined that she was fulfilling her usual household duties. At times she wandered away from home and had to be brought back by the police. During the year previous to her admission to our hospital she was irritable and "nasty," particularly toward her daughter who was considerate and helpful. The mental examination revealed her to be a very simple, childish woman of advanced age. She frequently became confused. Her talk was irrelevant but she was able to describe accurately many events that happened years ago when she was living on a farm in Virginia. She was committed to the State Hospital where she showed progressive deterioration.

Delirious and Confused Senile Dementia.—This form of senile dementia is marked by delirium and confusion. The acute onset is characterized by clouding of consciousness with hallucination. In the early stages of the condition simple auditory or visual hallucinations may be experienced. Later the hallucinations may be a more bizarre type. The duration of the delirium varies from single short episodes to prolonged periods. In the latter a remission with a clearing of consciousness may

mental confusion There may be either permanent or transitory sensory and/or motor involvement In the later stages of the disease the appetite diminishes, the patient becomes marasmic, sphincter control is lost, and personal habits are filthy

Mentally the patient's condition is marked by regression and forgetfulness One of the most characteristic features of the condition, a narrowing of the patient's interests, is often overlooked or discounted by his family Failure of the memory is another outstanding symptom As the memory fails, the stream of mental activity becomes filled with many bizarre fabrications In general, memory for recent events is lost first, and this is followed by a progressive encroachment upon remote memory Loss of memory or pyromanic proclivities may result in loss of property or serious burns As a result of the memory loss the individual shows signs of disorientation He becomes confused regarding the day, the year, the time, his birth and his whereabouts The normal elastic boundaries of comprehension are limited, and the patient clings tenaciously to a few ideas His general behavior is modified because of his limited comprehension, lack of concentration and narrowed interest As the ability to assimilate knowledge disappears more and more attention is given the personal necessities of life In accordance with the narrowed outlook on life, the patient prefers old routines, and he likes to reminisce Other conversation in which he indulges consists of empty chatter or torpid monosyllabism He misplaces articles of clothing or other personal belongings, and subsequently he may accuse individuals of stealing these articles from him He becomes suspicious and develops ideas of persecution Many useless articles, such as newspapers and outworn garments are hoarded, and it is not unusual to find these hoarded articles concealed on the patient A defect in judgment is present, and because of this the patient may be victimized by designing individuals to the extent of wasting his financial resources or bringing disgrace upon his family

The emotional change is first characterized by lability and then by irritability and apathy This character change, along with obstinacy, stubborness selfishness, outbreaks of temper and moral laxity, distorts the personality and leads to troublesome behavior There is a heightened sexual excitement which accounts for the feeling of being young again This transitory increase in the sexual drive may lead to repulsive exposures, to indecent liberties upon children, to other perverse activity, or to the contemplation or contraction of marriage

ease is a presenile state since it usually develops between the ages of 40 and 60 Presbyophrenia is characterized by marked memory and retention defects by disorientation and by lack of comprehension Afflicted individuals are restless and busy themselves with multiple senseless activities For example if they are bed patients they never seem to finish rearranging the bed clothes Because of their incessant activities they appear to have many interests about which they chatter endlessly Even in these narrations they lose the general theme of their story become confused and tend to repeat many words and ideas Fabrication and a marked degree of suggestibility are characteristic and in these symptoms the disease resembles Korsakow s syndrome

Alzheimer's Disease — This condition is very similar to presbyophrenia but it differs from the latter in that various focal signs such as aphasia agnosia and apraxia are present The entire process runs a rapid course culminating in the patient s death within a few years Delirious states may exist as well as restlessness confusion and a marked disturbance in the affect (see also Vol V Chap XLIII A)

Course and Prognosis of Senile Dementia — The development of senile dementia is slow and gradual and may extend over a decade before the disability requires hospitalization Usually it is impossible to decide exactly when simple senility merges into some form of senile dementia The course is essentially chronic and progressive and the outlook unfavorable Pneumonia the friend of the aged , may release the patient in a few years or chronic colitis cystitis or decubitus may close the scene

Treatment — From the prophylactic standpoint, nothing can be done to prevent the development of senility With the onset of senile dementia the patient should be kept as comfortable as possible in his normal surroundings and protected from physical injury An easily digestible diet, warm clothing and measures against constipation should be provided Insomnia may be controlled by mild hydrotherapy and simple hypnotics The patient should be prevented from committing sexual offenses from entering into disgraceful marriages and from other psychotic manifestations If paranoids trends or other uncontrollable behavior should develop hospitalization is the wisest procedure not only for the patient but for his family

Due to the many recent advances in public health the number of people in the age group from 60 to 80 is tremendously increasing Many of these people have led a satisfactory life and the wearing out processes

take place occasionally During the delirious period the patient is confused and restless and he wanders aimlessly about especially at night

Depressed and Agitated Senile Dementia — These forms of senile dementia are characterized by depression and agitation or both and by special pre occupations of a somatic and nihilistic nature Suicide is frequent

Paranoid Senile Dementia — It is not unusual to find a definite paranoid trend in senile dementia and this paranoid state is not a great deal different from that found in other non senile paranoid conditions Delusions are very common as a result of the affective disorder but they are more absurd and fantastic than in non senile cases because of the accompanying judgment defects The delusions concern either important or unimportant matters Their content may be of horrible sin poverty hypochondriasis nihilism, gigantism, dwarfism or death As the following case demonstrates, the most dangerous feature of the paranoid state is the patient s projections against other members of society

L K, 79 year old white male, shot and killed the county farm superintendent against whom he had nursed fancied grievances for a number of years Throughout his stay of ten years at the county farm he had become extremely angry when corrected, and he felt that he had been continually talked about by the superintendent When he was asked during the examination if he felt that he had been discriminated against by the superintendent he replied Decidedly so He treated me worse than any other He was always doing stinkin' little things to tantalize me' The patient also admitted that he had carried a revolver with him for the year prior to the murder However, his paranoid trends were directed not only against the superintendent but against the entire county farm personnel He believed that the other inmates talked about him and referred to him as "that crazy old bee man Delusions of having been robbed were also elicited

The examinations revealed that he was completely disoriented for time and place Both recent and remote memory were very defective and he stated in response to questions, 'Oh, dear, everything s a blank' He was unable to retain four digits and could reverse none Arithmetical calculation was impossible, and he failed to recall even one object in six after three minutes Attempts to examine him for grasp of general information only elicited the reply 'My if I only had my memory together Judgment and insight were lacking

Presbyophrenia — This condition, together with Alzheimer s dis

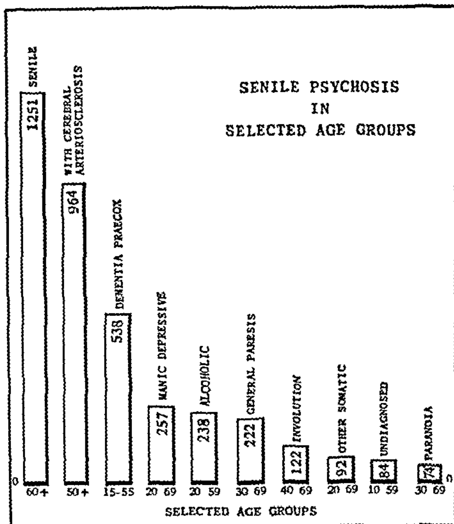


Fig 1 Admission rates of the leading ten psychoses for the period 1917 1933 rates based on age groups of population in which specific psychoses place 90 per cent or more of admissions (Taken from New Facts on Mental Disorders Charles C Thomas Baltimore Springfield 1940)

The mental disorders associated with age now appear as one of the leading problems in psychiatry As shown in Fig 1 the senile psychoses with a total admission rate of 1 251 (males 1,000 females 1,459) first admissions per 100 000 of the population over 60 years of age lead all psychoses Psychoses with cerebral arteriosclerosis takes second position among the psychoses with a total admission rate of 964 (males 1 143 females 1 803) first admissions per 100,000 of the population 50 years of age and over

may lead to a mental illness requiring custodial and institutional care It is not fair to many oldsters to be confined within the four walls of a state institution, yet, adequate provisions for the care of our aged have not yet been developed Over one-third of all the patients now confined at the Colorado State Hospital in Pueblo are over 60 years of age

Of all first admissions entering Massachusetts mental hospitals during 1917-1933 cerebral arteriosclerosis was the second highest cause of admission accounting for 11 3 per cent of the total

In comparing the numbers of admission with the numbers of the population, which are actually contributing to those admissions, the senile psychoses are in first position as shown in the accompanying graph (Fig 1)

Cerebral Arteriosclerosis with Psychosis

Cerebral arteriosclerosis may be a part of a general arteriosclerosis, or it may be a process limited wholly to the cerebral vessels Conversely it is probable that many individuals escape cerebral involvement when general arteriosclerosis is present Even with cerebral involvement a psychosis does not necessarily exist, unless the damage becomes quite marked Cerebral arteriosclerosis usually occurs between the ages of 50 and 65 After 65 the condition is complicated by senility or by senile dementia Etiologically there appear to be certain hereditary weaknesses of the arteries which lead to cerebral arteriosclerosis Other factors, which have been suggested as being responsible for the condition are excessive mental work mental stress and strain, intemperate use of food and alcohol, syphilis and acute infectious processes Cerebral arteriosclerosis also has been attributed, with less logic, to conscientiousness, dissipation, over exertion, laziness and many other factors, but there is little or no evidence that any of the above mentioned factors are responsible for the process

The incidence of cerebral arteriosclerosis, as reflected in the percentage of patients institutionalized, is higher than that of any other psychiatric condition with the exception of schizophrenia According to the statistics released for 1933, 16 8 per cent of cases admitted to mental hospitals suffered from cerebral arteriosclerosis with psychosis This figure represents only those cases actually committed to such institutions and does not include the many thousands of cases that are cared for in private homes The seriousness of this problem can only be real

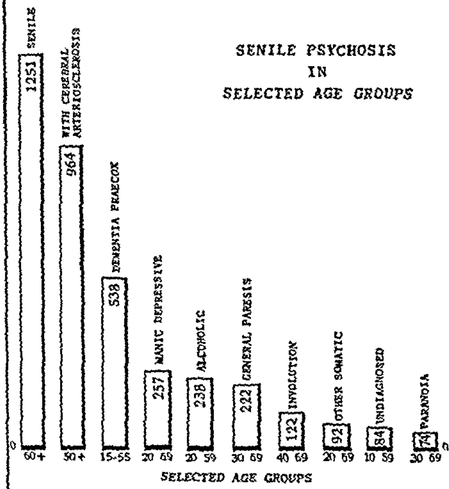


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ized when we remember that, at the present time, nothing is known of ways of preventing cerebral arteriosclerosis

Pathology —This condition is marked by definite sclerosis of the cerebral arteries In gross appearance the brain is small and shows marked convolutional atrophy and thickening of the pia arachnoid Fresh hemorrhage is often seen subdurally Three more or less distinct forms of microscopic changes occur, (1) atheroma, (2) colloid-calcareous arteriosclerosis and (3) arteriocapillary fibrosis In the atheromatous form degeneration of the elastica and media occurs The intima proliferates and undergoes degeneration As a result the cerebral vessels soften and rupture, focal lesions follow rupture of the larger vessels In the colloid calcareous form the media is replaced by the colloid calcareous deposit, and the intima proliferates with a resultant softening of the adjacent tissue In the arteriocapillary fibrotic form the sclerotic process is one of thickening throughout the vessel walls These sclerotic changes affect the blood supply to the nerve cells and probably are indirectly responsible for the pathological changes of chromatolysis, atrophy and fatty degeneration of the nerve cells In addition to these cellular changes, the glia proliferates to form a perivascular gliosis The symptoms of cerebral arteriosclerosis are the result both of vascular hemorrhage with its resultant cortical softening and of alterations in the blood supply to the nerve cells

Symptomatology —The first symptom is often some evidence of focal disturbance such as apoplectic seizure, aphasia or paraphasia This is especially true if the sclerotic process involves the large cerebral vessels Such a cerebral accident appears to hasten mental deterioration and dementia However, this abrupt manifestation of vascular involvement usually is preceded by less severe evidence of vascular disease In general the mental symptoms are gradual in their onset, and they may not become serious for a number of years During the progression of the disease the patient realizes that something is wrong with his mind Names are forgotten easily, concentration is difficult, interests become narrow, and initiative weakens It is more and more difficult for the patient to arouse himself to his duties There is progressive encroachment upon the memory, and fabrications are often used to compensate for these memory loses The affect becomes labile, and emotional incontinence develops This is especially true following a stroke Emotional instability is expressed further by increasing irritability and even by outbursts of morbid anger Continued advance in the disease leads

to periods of confusion clouding of the consciousness disorientation and partial or complete amnesia During these periods the behavior is inconsistent with the usual activity of the individual Anxiety states may exist and may culminate in an apprehensive panic The patient may suffer from delusions of a horrible nature As the disease progresses a gradual deterioration of the entire personality takes place

The most disagreeable *physical symptoms* are headache dizziness and other unpleasant head sensations Buzzing in the ears scintillations before the eyes fainting spells feelings of pressure in the head and disturbance of gait are likewise troublesome Other physical changes are tremor of the head and hands paresthesia and pupillary inequality A retinal sclerosis may be present Moore has pointed out that one half of the cases which show a retinal sclerosis subsequently suffer from cerebral vascular accidents Epileptiform attacks frequently occur and may be an outstanding feature of the clinical picture Various heart and kidney disabilities often accompany the disease The following case is illustrative of some of the above mentioned signs and symptoms of cerebral arteriosclerosis

L A 57 year old white male was admitted to the hospital because of his homicidal threats against his family The history showed that four years ago the patient began to be irritable complained frequently of dizziness and expressed numerous somatic complaints He argued and disagreed with everyone and was domineering in the home About 18 months ago he was arrested and jailed after threatening his wife with a shotgun In the past year he showed a great deal of emotional instability and expressed ideas of his wifes infidelity on numerous occasions Ten days prior to admission he backed four members of his family to the wall with a knife and threatened to cut them to pieces just to show them I was still boss

In the examination upon admission he displayed emotional lability by weeping frequently and then quickly shifting to a different mood level His talk was coherent and relevant and he possessed a defensive attitude with definite paranoid trends He admitted increased irritability for four years and said that he occasionally lost his temper He was preoccupied with his wifes supposed infidelity and accused his children of wanting him out of the way He believed they purposely did things to antagonize and upset him Hallucinations were *not* elicited Orientation was satisfactory but examination of recent memory was

punctuated by such remarks as "I'm gonna guess", "Now let me see", and "Well, sir, I can't tell you". Remote memory was relatively unimpaired. He retained six digits forward and reversed four. He recalled four of six test objects after three minutes. Calculation and general information were fair, but judgment was impaired and insight was wholly lacking.

Diagnosis — Few diseases other than the forms of senile dementia can be confused with this condition. However, dementia paralytica may simulate cerebral arteriosclerosis with psychosis but a history of syphilis and a positive serology serve to facilitate the diagnosis of the former. Cerebral arteriosclerosis with psychosis can be differentiated from functional disturbances of depression and anxiety by the signs of vascular involvement and by the underlying organic basis of the personality disturbance. The differentiation between senile dementia and cerebral arteriosclerosis with psychosis is always difficult and sometimes impossible. The occurrence of an organic disability between the ages of 50 and 65 with physical findings of cerebral vascular involvement, such as headache, dizziness, tinitus, aphasia, apoplexy and with mental findings of irritability, emotional instability and insidious memory changes are strongly suggestive of cerebral arteriosclerosis.

Prognosis — The prognosis is uniformly guarded. In some cases a good adjustment may be maintained over a long period of time. Many individuals with noticeable mental and physical impairment can get along outside of an institution until dementia or physical handicaps necessitate their hospitalization. Even in cases with irritability, episodic behavior, apoplexy and special preoccupations of suspicion and reference there is a possibility of improvement so that the patient may remain at his home. However, this improvement is usually transitory, and apoplexy, recurrence of confused periods or progressive dementia makes it necessary to institutionalize the case.

Treatment — The treatment must be conducted along palliative lines. Physical and mental rest is necessary, but some light activity should be provided as long as the patient can indulge in it without harm. Small doses of barbituric acid derivatives are of value in combatting the general restlessness. Hydrotherapy in mild form or barbital, 0.3 gm (gr v), is useful in overcoming insomnia and early morning waking. The confused, apoplectic and delusional individuals eventually require hospitalization.

Epidemic Encephalitis

Epidemic encephalitis often called the twentieth century disease presents one of the most baffling conditions known to medicine The disease was described by von Economo in 1917 epidemics of encephalitis have occurred all over the world since that time Its epidemiology is devastating its symptoms polymorphic Acute epidemic encephalitis rivals neurosyphilis in its variety of clinical forms and sequelae For other features of this disease see Vol VI Chapt III

Etiology and Pathology — Etiologically the disease is believed to be caused by a filtrible virus Acute and chronic forms of epidemic encephalitis have been described but the latter probably is merely a continuation of the former The pathology consists of vascular congestion and thickening of the meninges toxic degeneration of the nerve cells neuronophagia proliferation of mesoblastic cells and glial elements and infiltration of the perivascular spaces with lymphocytes large mononuclear and plasma cells The perivascular infiltration is a very characteristic finding and persists in the chronic stages Petechial hemorrhage is common Calcification of the cerebral arteries especially those of the globus pallidus is observed in some cases Any or all of the above mentioned changes occur in any region of the neuraxis however the areas chiefly involved are the basal ganglia and the region of the Sylvian aqueduct especially the subthalamic region The cortex subcortex cerebellum brain stem and spinal cord may be involved

Symptomatology — The clinical symptoms are of both neurological and psychiatric significance In the acute stage the neurological symptoms include paralytic phenomena of cortical origin aphasia agraphia astereognosis ptosis strabismus Jacksonian or generalized convulsive seizures tremors myoclonia athetoid and choreiform movements hypotonia hypertonia hyperkinesia dyskinesia and hypokinesia The postencephalitic or Parkinsonian syndrome (hypokinesia hypertonus oculogyric crises and masked facies) may appear during the acute stages but it usually occurs months or even years later These symptoms result from an involvement of the basal ganglia usually the substantia nigra The torpor and rigidity of the facies should not be confused with catatonia

The psychiatric symptoms which occur in the acute stage consist of drowsiness with gradations to lethargy stupor and coma lethargic encephalitis There are slowness of the intellectual function cloud

ing of the sensorium, impairment of memory, delirium psychomotor excitement, restlessness, irritability, talkativeness and hypo- or hypersomnia. In the acute stages insomnia may persist for several days before the onset of the typical lethargy. In the chronic forms the sleep rhythm may be reversed. This disturbance is due to involvement of the hypothalamic region. As the disease becomes chronic, the patient may be euphoric, elated and excited, depressed with suicidal preoccupations, paranoid with delusional trends or psychoneurotic with exaggerated complaints. These reactions are somewhat in accord with the individual's previous personality type. Generally speaking, though irritability, explosive reactions, stubborness and apathy constitute the dominant emotional alterations. In addition there are diminution of voluntary movements as shown in the masked facies, conscious attention to movement, restricted interest and emotional deterioration. The apathy and emotional deterioration are the result of the patient's preoccupation with his physical disability. Other preoccupations usually are absent. Although there are bradykinesis, bradyphrenia and emotional deterioration, the intellect remains unimpaired. This fact is of importance both in diagnosis and treatment. Numerous personality aberrations occur in the child and result in marked behavior disorders. For the disturbances in children see Vol VII, Chapt III.

Prognosis — It is impossible to forecast the prognosis and course of the disease in any single case. Death occurs in the acute stages in 10 to 50 per cent of the cases. In nonfatal cases recovery from the acute phase usually occurs within 3 weeks, but this recovery may be followed years later by the postencephalitic syndrome. It is estimated that infection continues in 75 per cent of the survivors of the acute stage, and that this infection results in neurological, endocrine, metabolic or mental involvement. The psychiatric prognosis in the chronic state is not necessarily poor since the emotional reaction often improves with adequate treatment. The prognosis of the physical disability is uniformly unfavorable.

Treatment — In the acute stages the treatment is nonspecific symptomatic and palliative. Urotropine, convalescent serum, hydrotherapy and intravenus iodine have been used with doubtful results. In the chronic phase of the disease several drugs are of value. Hyoscine by mouth probably is the most effective drug for combating the muscular rigidity. Tincture of stramonium likewise lessens rigidity and increases the ability to perform fine movement. Other members of the belladon

nic group such as scopolamine and atropine are useful Sodium fluoride 0 0 5 mole solution which supposedly acts by breaking the neuromuscular synapse sometimes is used to lessen the tremor Psychiatric treatment is of the utmost importance It consists in careful review of the problem with the patient desensitization to his disability and an attempt to aid him in revaluating his outlook on life

Epilepsy

Epilepsy is a term under which are grouped a great variety of conditions characterized by convulsive attacks that involve disturbances of consciousness such as faints absences blanks and amnesias The convulsions themselves vary and are manifested as status epilepticus nocturnal convulsions Jacksonian seizures cortical myoclonus continuous epilepsy of single muscle groups petit mal and grand mal Convulsive reactions occur in a wide variety of conditions and we should speak of the epilepsies rather than epilepsy The epilepsies can be broadly classified into two general groups (1) symptomatic epilepsies in which the condition is precipitated by some known organic or toxic factor underlying the condition such as cerebral syphilis brain tumors meningitis trauma alcohol uremia and endocrine dysfunctions and (2) idiopathic or essential epilepsy for which no known cause has yet been discovered Even in the case of the symptomatic epilepsies the fundamental cause of the convulsion is not known In general the symptomatic epilepsies disappear with the removal of the precipitating factor Since it is obviously outside the scope of this discussion to describe all of the various forms of epilepsy the following remarks concern idiopathic epilepsy

Idiopathic epilepsy is a disease which was known to the ancients Two thousand years ago Hippocrates wrote The sacred disease appears to me to be in no wise more divine nor more sacred than other diseases but it has a natural cause from which it originates like other affections Unfortunately modern science has not yet discovered this cause Heredity head trauma migraine alcoholism alkalosis watery edema of the brain vasomotor instability and various toxic processes have all been suggested as etiological factors in the production of epilepsy In addition the episodic behavior may be merely a part of a prolonged mental derangement While some very good evidence has

been advanced for some of these factors, there is no widespread agreement as to the fundamental etiology of epilepsy

Idiopathic epilepsy usually develops early in life Spratling found that the disease had its onset before the age of 10 in 38 5 per cent of the cases between the ages of 10 and 20 in 43 per cent and between the ages of 20 and 29 in 9 per cent Gower states that 76 per cent of the cases develop before the age of 20

As might be expected, very little is known regarding the essential pathology of epilepsy Alzheimer demonstrated changes in Ammon's horn and superficial gliosis of the hemispheres in 60 per cent of cases Changes in the Purkinje cells of the cerebellum have been noted also Spielmeyer believes that these changes occur because of a vasomotor spasm which results in ischemia followed by parenchymatous changes Freeman notes the presence of embryonal cells in the superficial stratum of the cerebral cortex More recent investigations by Lennox and Cobb, Fay Alexander, Dandy and McQuarrie indicate that biochemical alterations, disturbance in water metabolism metabolic variations and dysfunction in the flow of subarachnoid fluid are the causes of epilepsy In addition to the anatomical, physiological and biochemical changes which may explain the conclusive reactions, certain psychological phenomena may play a role in their development Accordingly the pathogenesis of epilepsy must be sought not only on a physical and a chemical basis but also on a psychobiological basis For a more extended discussion of epilepsy see Vol VI, Chapt XXX

In itself epilepsy does not constitute a mental disorder, but epilepsy and the mental disturbances associated with it are so intimately related that it is very difficult to consider them separately While not every epileptic becomes definitely mentally sick, he is scarcely ever normal He displays certain mental symptoms which, taken as a whole constitute the epileptic personality' Whether this personality is a result of the disease , or whether epilepsy is simply an accentuation of an 'epileptic make up is questionable Whatever may be the etiological role of the epileptic personality, it is marked by egotism conceit, emotional instability hypochondriasis, religious sentimentality, inadaptability, cruelty, laziness, egocentricity, abnormal sensitiveness and an inability to meet the common situations of life

In addition to the development of the epileptic personality other psychotic reactions occur These are of a varied nature There may be periodical ill humor which lasts from a few hours to several days Epi

leptic dream or twilight states in which there is considerable confusion occur Delirious conditions are quite common These are either confused delirious states accompanied with hallucinations and ecstatic or anxious delusions or they may be states of conscious delirium in which the confusion is very slight During this conscious delirium the patient may take aimless journeys and even commit crimes for which he is absolutely amnesic Epileptic deterioration of the personality as a whole occurs in certain cases According to Noyes this deterioration is characterized as follows Attention intellectual processes and emotional responses become increasingly dull comprehension and memory become impaired The patient shows a tendency to stress the trivial as much as the important to become circumstantial in his ideational expression to disregard the interests of others to become selfish affectively self satisfied boastful lazy careless in appearance while his facies is characterized by expressionless vacuity His speech comes to be slow and monotonous with but little variation as to accent or tone and his vocabulary becomes limited The degree to which dementia progresses if it occurs varies greatly In extreme cases this dementia is great the patient existing at a purely vegetative level having no interest in and no intelligible communications with social environment Dementia is a much more frequent outcome in those who develop epilepsy in early childhood than in those in whom it appears in later years

Paranoid states are common and transitory states of depression and excitement are seen Among the most dangerous of all psychotic reactions that of the epileptic furor state following a convulsion is outstanding The patient is maniacal homicidal destructive and a menace to those about him Many horrible crimes have been committed in the epileptic furor state In most instances these crimes have no basis and are absolutely unpremeditated Epileptic equivalent states consist of an attack of mental disturbance instead of a convulsive seizure and they are characterized by automatic acts which lack motive While these states are fairly common usually they do not approach the violence of the furor states

Physically the convulsions themselves vary and are manifest in different ways Of these the most common are the grand mal and the petit mal The grand mal is characterized by a sudden and complete loss of consciousness which is followed in order by tonic spasm clonic jerking of the muscles which have been in clonic spasm and by coma

Upon recovery from the coma the patient is often somewhat bewildered and tired The petit mal is marked by a momentary loss of consciousness with few or no convulsive phenomena An epileptic attack may be preceded by a sensory, motor, visceral, or psychic "aura"

In order to adequately describe idopathic epilepsy, typical cases are presented in the following discussion The first case is that of an *epileptic with deterioration* We were able to observe this patient over a period of three years

M S, a 22 year old white female, was admitted to the clinic with a report of generalized seizures According to the history the first seizure occurred at the age of 13 in the setting of the patient's second menstrual period The seizures occurred irregularly from the time of their onset They usually lasted for ten or fifteen minutes and were characterized by a loss of consciousness, convulsive movements over the entire body, tongue biting and urinary incontinence The seizures were followed by a deep sleep, but a short time before the hospital admission they began to be followed by wakefulness and restlessness They occurred only at night, were often precipitated by emotional upheavals and were definitely worse near the menstrual period Their frequency increased steadily until the nine months prior to admission the patient was experiencing seizures each night Coincident with the increase in the number of seizures there was a definite personality change which was characterized by a feeling of jealousy toward her mother and her step sister

Upon admission to the clinic the patient appeared untidy and lay quietly in a semi stuporous state with a facial expression of bewilderment and anxiety She responded slowly to questions and demonstrated decreased psychomotor activity The affect was predominately one of perplexity She gave evidence of auditory hallucinations and of vague persecutory delusions against her mother and step sister She was disoriented for place but not for time and person Both remote and recent memory were grossly defective grasp of general information was exceedingly poor, arithmetical calculation was deficient, and judgment and insight were lacking

During the seven days that she was hospitalized the patient continued much as she was upon admission confused disoriented untidy and semilethargic Following her discharge without improvement she remained at home for two and one half years and then was readmitted At this time an encephalographic examination showed marked cortical

atrophy Despite treatment the seizures continued and although she remained for some further time with her parents her progressive deterioration required her transference to the State Hospital She remained in an unimproved condition at that institution

The second case is that of an *epileptic furor state* This state and the epileptic equivalent state are the most common causes of wholesale homicide The outbursts in these conditions are second only to those of postencephalitis in their degree of danger to the community

W R a 38 year old male was brought to the hospital in a patrol car by eight police officers Just previous to his admission he had an outbreak during which he smashed windows kicked his brother down the steps and severely injured his mother by striking her several times over the head with a chair Later he ran into the yard picked up an ax and began cutting down the posts of the porch He threatened to kill anyone who tried to interfere with him

The history showed that there had been epileptic attacks at infrequent intervals from the age of 10 but that these had been getting worse During the first two weeks hospitalization he had two seizures which were followed by a furor state of several days duration Restraint was necessary to control him He was later admitted to the State Hospital and follow up reports from that institution stated that he remained unimproved with periods of confusion violence and assaultive outbreaks

The third case is that of an *epileptic equivalent state* This state is of especial interest because there is no loss of consciousness and the mental attack seems to replace the more common convulsive seizures As in the case of the epileptic furor state the epileptic equivalent state is of great medicolegal importance

E R a 25 year old white male was admitted to the hospital with the following history He had had epilepsy from birth but the condition supposedly improved with the advent of puberty His sudden outbreaks with no loss of consciousness occurred at irregular intervals but became more frequent shortly before his admission The outbreaks were characterized by belligerence and irrelevant incoherent and abusive language The excitement usually lasted for many hours and was followed by periods of unusual quiet The patient was completely amnesic for the events which occured during the period of excitement

During the first week of his stay in the hospital the patient had several outbreaks. In one of these he attacked an orderly, and in another he picked up a table, threw it across the room and defied anyone to come near him. He was extremely violent, abusive, surly, antagonistic and obscene. It was always necessary to safeguard other patients from him, and neither luminal bromides nor continuous baths quieted him. He showed no improvement and was committed to the State Hospital where he continued to deteriorate.

The *course* of true epilepsy is chronic and progressive. However the outlook is somewhat better for children, and epilepsy occasionally may cease at puberty. It is probable that the length of life is somewhat shortened by the disease. Obviously, accidents during the convulsive state may bring the disease to an abrupt and fatal termination. Terminal pneumonia is fairly common.

Treatment. — Since so little is known of the true nature of epilepsy, *treatment* must be largely symptomatic and safeguarding in type. While recovery can scarcely be expected much may be done to ameliorate the patient's sad condition. His personality should be studied carefully and re-educative measures instituted. His occupation must not endanger either himself or others. Dietary measures such as salt restriction, low water intake and low protein intake, are often helpful. A ketogenic diet may be of value in the case of children. Constipation must be continually combated. Certain drugs are used with beneficial results. Bromides are often recommended, but they tend to brutalize the patient. Sodium phenobarbital or dilantin (see next section) is probably the drug of choice for controlling the convulsions and its administration may be continued indefinitely. During the attacks the patient must be prevented from injuring himself. Foci of infection should be removed in an effort to eliminate the precipitating factor for the convulsions. As a general rule all epileptics do better under routine and standardized conditions and their institutionalization with vocational management frequently is productive of excellent results which could not be obtained in any other way. Certainly in the face of definite psychotic symptoms which are a menace to the patient and to the community a suitable institution is the only safe haven. Finally, the treatment of epilepsy should aim at its eugenic prevention. Although the disease may not be of an hereditary nature present evidence indicates that feeble mindedness and certain personality deficiencies seem to occur more often in epileptic tainted stock than in the general population.

Consequently sterilization or permanent institutionalization of epileptics should be considered

In 1937 *dilantin* was introduced by Putnam and Merritt[8] Since that time many new experimental drugs have come into popular use In general it can be said that not much is known at present as to exactly how most of these drugs act although the literature abounds with many theories Putnam and Merritt feel that cortical rhythm is normally stabilized by endogenous metabolites and that the paroxysmal cortical *dysrhythmias of epilepsy are dependent upon a deficiency of such* metabolites or an abnormal response to them There is reason to believe that both physiological anticonvulsants such as dextrose carbon dioxide pyruvic acid and aceto acetic acid and the synthetic anti convulsants produce their effect by giving rise to an acid milieu within or about the nerve cells

The synthetic anticonvulsants now a large and fairly distinctive group are predominantly of a composition which suggests that they are broken down by cellular activity perhaps chiefly within the brain giving rise to stable acid products such as benzoic acid Their anti convulsant activity has been shown to be entirely independent of any hypnotic activity It is suggested that the use of anticonvulsants in the treatment of epilepsy may be regarded as a substitution therapy

In grand mal epilepsy the treatment of choice is *phenobarbital* or *dilantin* alone or in combination Recently dilantin has been proven to be the drug of choice although on occasions some broken doses of phenobarbital are necessary Many patients tolerate extremely large doses of phenobarbital for a long period of time However toxic cumulative effects may occur These effects include apathy drowsiness lethargy skin rashes mental lassitude and dullness The average dose of dilantin is around 0 3 to 0 4 gm (gr 4 5 to 6) per day Some maximum dosages reported have been as large as 0 6 gm (gr 9) daily

Merritt and Putnam[10] have recorded the toxic manifestations that may be associated with the therapeutic use of the anticonvulsant drug dilantin sodium (the sodium salt of diphenylhydantoin) The untoward symptoms which might be attributed to the effect of the drug on the nervous system are lowering of vision diplopia nausea dizziness ataxia and tremor These symptoms occur in about 15 per cent of the patients in the earlier weeks of the treatment and usually subside during later treatment Reactions of the skin and gums have occurred also

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ment is started Medication with the drug need not be discontinued because of the gingival hyperplasia

Many other new drugs in an experimental phase used in combating grand mal convulsions are now on the market *Meboral* (Winthrop) may be used alone but is best used in combination with dilantin for grand and petit mal Its usefulness is limited, it is used usually only in cases refractory to phenobarbital Its dosage is from 0.2 to 0.4 gm (gr 3 to 6) per day *Del mal* (sodium vinobarbital) (Sharpe and Dohme) usually is used in combination with dilantin It appears to have a slight less toxic effect than phenobarbital and is given in an average does of 0.1 gm (gr 1½) three times a day *Medinal* (soluble barbital Warner) is of little specific value Some workers feel that *desoxycorticosterone acetate* (Schering) is of value if given by intramuscular injection at first and then later by pellet implantation Possible rationale of the use of this hormone is related in some vague way to the reduction of the brain potassium level The efficacy of this method of treatment has not yet been established A derivative of dilantin called *mesantoin* (Sandoz) has been used to some extent in treatment of grand mal epilepsy Formerly it was called phenantoin The drug is not generally commercially available and is still in the experimental stage Another drug *hydantal* (Sandoz) is simply a combination of mesantoin with small doses 20 mgm (gr ⅓) of phenobarbital Its use is primarily designated for those who would rather take one capsule than two

Petit mal epilepsy exists rarely as a phenomenon in itself, it occurs most commonly in patients who have grand mal epilepsy of varying degrees of intensity The above mentioned drugs used in grand mal epilepsy seem to have less effect on the attacks of petit mal Usually a combination of drugs is used to combat both types of illness In those patients who suffer from petit mal attacks alone a new drug called *tridione* (Abbot) had been championed by Lennox[23] and his associates in Boston and has met with very great success in general Tridione has sedative analgesic and anticonvulsant properties It has no effect on grand mal seizures and some reports indicate that it may even tend to increase frequency and severity of grand mal attacks It is given in dosages of 1 to 2 gm (gr 15-30) per day in capsules of 4½ gr each It is usually advisable to start with low dosage and increase to the maximum effective dose without toxic effect The most common toxic effects of tridione are skin rashes and annoying and un

Large doses of dilantin tend to bring out, in addition, signs usually associated with specific involvement of the pyramidal tracts, more marked in the right extremities in some reported patients Large doses of the drug dilantin have no sedative or soporific effect which clearly distinguishes its toxic action from that of the barbiturates

The occurrence of "sore mouth" as frequent complication in the dilantin treatment of epilepsy was reported first by Kimball[6] in 1939 Of 152 patients under treatment for from 2 to 11 months 57 per cent showed changes in the gingival tissue, varying from slight to extreme hyperplasia The changes were not proportionate to the amount of ingested dilantin sodium or to the length of time that the patient had been taking the drug As the appearance of the gingival tissue suggested scurvy, even though all other signs such as purpura and sore joints were absent, the ascorbic acid content of the blood serum was determined in a number of cases From these serum analyses Kimball concluded that the degree of hyperplasia directly paralleled the deficiency of ascorbic acid That is, persons with the most marked hyperplasia showed the lowest level of ascorbic acid which dropped to 0 1 mgm per 100 c c in some cases However the administration of large doses of ascorbic acid i e, 300 mgm daily by mouth, did not improve materially the gingivae

Merritt and Putnam[8] in their original report dealing mostly with adults cited a much lower incidence of gingival hyperplasia after treatment with dilantin, 4 per cent as compared with the 57 per cent reported by Kimball The chief difference between the two groups was that of age The study by Merritt and Putnam "showed no evidence of deficiency of ascorbic acid Lennox[3] supported Merritt and Putnam in the opinion that vitamin C deficiency was not related to dilantin hyperplasia of the gingivae

This gum hyperplasia has but slight resemblance to that of scurvy and is apparently not altered significantly by the administration of ascorbic acid according to Zislin and associates[89] Surgical intervention plus massage and hygienic care is advisable in instances in which the growth of the gums has advanced to such an extent that prophylactic measures cannot be employed without first reducing the size of the gums Best results are obtained by routine home care including inter-dental massage Because of the apparent therapeutic value of inter dental massage in minimizing and possibly preventing the condition gingival treatment should be done early preferably when dilantin treat

ject to grand mal and petit mal attacks in addition to the psychomotor seizures and it has been necessary to continue to control these with phenobarbital and dilantin as they frequently recur when the drugs are discontinued The use of tridione however in conjunction with other anticonvulsants such as phenobarbital or dilantin has almost completely controlled the psychomotor seizures in a large percentage of cases and has resulted in a decided psychological improvement The drug has been given by oral administration in dosage of 0 3 gm (gr 5) three times a day to every patient In this dosage no symptoms of toxicity have been reported and no contraindications of limitations to the use of the drug have become apparent

In *status epilepticus* which involves a series of repeated severe convulsions with an almost continuous convulsive state dramatic types of therapy are indicated Sodium amytal 0 5 to 1 gm (gr 7½ to 15) may be administered intravenously

It is reasonable to assume that with increasing amount of research being carried on with anticonvulsant drugs that the physician may soon augment further his therapeutic armamentarium on epilepsy

Electroencephalogram in Epilepsy

A recent diagnostic tool of utmost value in the diagnosis of epilepsy is the electroencephalogram Electrical potentials originating in the cerebral hemispheres may be picked up and recorded after amplification through the intact skull and scalp Recorded tracings of this activity *are called an electroencephalogram or E E G The oscillations of the* E E G range in frequency normally from about 1 to 40 cycles per second The voltage of the potential varies from about 10 to 300 micro volts, 1 micro volt equals one millionth of a volt The human E E G was described first in 19 7 by Hans Berger who established his basic normal pattern of activity Normal activity is found under conditions which would be expected in healthy adults who are physically and mentally relaxed and at ease but fully awake in a normal state of nutrition and a normal physical environment

A normal record has a relatively simple pattern It consists essentially of two types of waves The most obvious of these is a fairly regular often continuous activity at a rate of approximately 10 per second with a permissible range from about 8 to 1 or 13 per second This activity best seen in leads from the occipital and parietal area

usual visual sensitivity to light. Recently three cases of agranulocytic anemia with two fatalities have been reported. Repeated blood studies should be done, and at the first sign of decreased blood count the drug should be discontinued immediately.

Another drug used recently in the treatment of petit mal attacks is *glutamic acid hydrochloride*. This may be used in combination with dilantin or phenobarbital or by itself. The average dose is from 8 to 10 gm per day. Capsules usually are prepared in 0.3 gm (gr 5) each and the patient usually takes 10 capsules three times a day. Glutamic acid is an amino acid intimately related to brain metabolism which may partially explain its beneficial action. It is known that glutamic acid lowers the pH of the urine but seems to have no significant effect on the acid base balance of the blood. No particular toxic effects have been reported except for an unpleasantness associated with acidity. Its use is contraindicated in cases of peptic ulcer.

Psychomotor attacks or *epileptic equivalent states* infrequently are influenced by medication. In attacks of this kind there are usually no convulsive manifestations although there may be some tonic spasm or contortion of the trunk muscles, and the patient may stand immobile with a slow rotation of the body. The principal characteristic of the attack consists of a period of automatic or abnormal behavior. The patient appears to be confused and he may perform some unreasonable unmotivated or purposeless act. He may automatically carry out a seemingly purposeful act. Frequently he is seen to mutter to himself or make chewing movements. He may void involuntarily. He has a complete amnesia of what has transpired even though there is no complete loss of consciousness during the act. The patient at times may become irritable or wildly violent and may commit crimes during his attack. Seizure may last for a few minutes or many hours. Dream states, fugue states, epileptic automatisms are types of psychomotor attacks.

De Jong[9] feels that tridione is effective in the control of psychomotor seizures. In some cases there has been a spectacular improvement. A large percentage of his patients had had attacks for many years which had failed to respond to any other medical regime. Many of the cases had grand mal and petit mal attacks in addition to the psychomotor attacks. It is felt that tridione has not proved to be sufficiently effective when used alone, probably owing to the fact that most of the patients subject to epileptic equivalent states are sub

Focal structural lesions near the surface of the brain which are large enough to project onto the surface can often be localized by

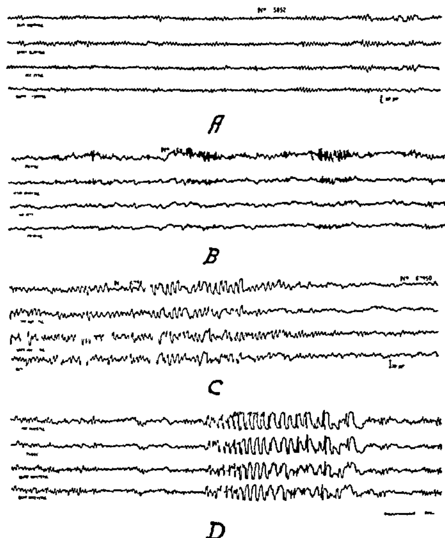


Fig 2 A Normal many 9 to 10 per second waves

B Paroxysmal fast activity called grand mal by Gibbs and Lennox
C Abnormal slow activity
D Spike and wave activity referred to by Gibbs and Lennox as petit mal.

was named 'alpha" by Berger It is also known as "Berger rhythm' Another normal frequency, which is much less continuous and lower in amplitude than the alpha activity, is known as beta activity It is seen best in the frontal area It is faster than the alpha activity being about 18 to 30 cycles per second In addition a small amount of low voltage 6 to 8 per second activity, is noted, it is still consistent with normality

Predominantly slow activity is sometimes referred to as "delta" activity and is seen in a number of conditions, most of which have in common an obvious physiological or pathological decrease in brain cell metabolism One of these conditions is sleep At the beginning and end of the sleep, however, and during the induction period of anesthesia, rapid activity is found A physiological reversible anoxemia of short duration can be produced by hyperventilation Blowing off CO leads to cerebral vasoconstriction, sufficient in patients with a marginally functioning nervous system to produce E E G changes and in certain instances even clinical manifestations such as convulsive seizures

In various manifestations of epilepsy characteristic abnormal patterns can be recorded during an attack In addition, a high percentage of patients suffering from attacks show abnormal activity of one type or another in the free interval between attacks

'Petit mal' seizures always are accompanied by a specific brain wave pattern which can be recorded This pattern consists of regularly alternating 'spikes' and slow rounded regular waves, also of high amplitude These 'spike and wave" combinations occur at the rate of about 3 per second The amplitude may be highest in the frontal or occipital leads This type of spike and wave activity is seen without a clinical seizure in the records of more than 80 per cent of patients with clinically proven petit mal attacks

"Grand mal seizures, the classic epileptic convulsive attacks always are accompanied by high voltage rapid activity This pattern may be found in experimental animals during induced seizures In between grand mal attacks patients usually show slow activity or spike and wave patterns either spontaneously or after hyperventilation A sudden sychronous burst of slow activity in all areas of the head may be safely interpreted as a "conclusive" pattern In psychomotor equivalent states of epilepsy, abnormal mental states ranging from confused to homocidal range, slow activity is recorded with a typical flat top wave

The following sequence is essential, a severe head or brain injury fol lowed by unconsciousness or delirium recovery with changes in be havior irritability increased susceptibility to alcohol and vertigo as part of a psychosis which usually becomes progressively worse It is agreed that if mental disorder is to be attributed to trauma either as a sole cause or as a contributing factor there must be shown a direct continuity and an accepted sequence of symptoms from the time of the injury to the appearance of the mental symptoms If a period without mental symptoms of more than thirty to ninety days elapses after the injury it is very unlikely that the trauma is a causative factor

Mental deficiency following head injury is almost unknown It cannot occur unless there has been severe structural brain injury It is common to claim that feeble mindedness in children is the result of head injuries of one kind or another but careful inquiry into the child s history usually will demonstrate that the feeble mindedness is of con genital origin Any claim of parents or attorneys that a child is feeble minded as a result of head injury should instantly arouse suspicion in the mind of the physician and he should make a very careful investi gation before expressing his opinion

In the case of epilepsy which supposedly follows head injury ex treme care should be used in making the diagnosis As a matter of fact very few head injuries result in epilepsy In the event that epilepsy is alleged to be the result of a head injury a most careful history of the patient and his family should be obtained In the greater percentage of cases especially those in which there has been no structural brain injury or skull fracture it can be shown that if epilepsy really exists it was present before the injury This is especially true of idiopathic epilepsy However if the Jacksonian type of seizures occurs they are on the basis of focal brain irritation and are much more likely to be traumatic in origin

Genuine posttraumatic mental conditions are very rare In New York 81 of 9 91 (0 9 per cent) first admissions to the State Hospital for the year ending June 1921 were posttraumatic psychoses in 1930 95 of 9 581 (1 0 per cent) first admissions were of traumatic origin The United States Census Bureau reports an incidence in the entire country of 0 31 per cent in 19 , 0 44 per cent in 19 6 and 0 35 per cent in 19 7 Eager states that the incidence of insanity among soldiers with head injury was not greater than that of the general population Although posttraumatic phychoses are rare, the fact that so frequently

focal EEG changes and may aid in the diagnosis of intracranial neoplasms Typical EEG patterns of some types of epilepsy are shown in Fig 2

Posttraumatic States

The term posttraumatic psychosis should not be employed indiscriminately to designate any mental disorder which follows trauma but should be reserved for abnormal mental states subsequent to head injury A mental disorder may be the sequel to an injury elsewhere, such as a surgical operation or a loss of a limb but, since the association between the trauma and the mental disturbance is not a direct one, the term posttraumatic should not be applied Neither should this term be applied to a mental illness subsequent to trauma unless a very definite connection can be demonstrated between the trauma and the onset of mental symptoms In many cases cerebral trauma may simply precipitate a latent psychosis For example, it may supply the emotional factor which precipitates a manic-depressive psychosis in a predisposed person Likewise trauma may be a contributing factor in lighting up a latent schizophrenic reaction However neither of these should be confused with a true posttraumatic psychosis Moreover, while it is generally recognized that head injury plays a part in the development of general paresis* not all paresis which develops subsequent to such an injury is on a traumatic basis In this case, as in other psychoses the time relationship is most important and each case must be evaluated by a study of the history of the mental condition prior to the injury and a determination of the time elapsing between the injury and the appearance of the mental symptoms

Because cerebral trauma may precipitate latent psychoses the patient's personality type antecedent to the trauma should be determined In this study of the personality such factors as alcoholism syphilis, cerebral arteriosclerosis manic-depressive tendencies, mental deficiency schizophrenic reactions and psychoneurotic manifestations should be carefully evaluated in determining whether or not a psychosis is of posttraumatic origin Moreover there must be a certain sequence in the appearance of the symptoms of a true posttraumatic psychosis

* The role of head trauma in the development of general paresis is dependent upon the theory that the head injury increases the permeability of the cerebral vessels to the treponeme and causes a latent syphilis to become active and localized in the cerebrum

cussion contusion or laceration may be followed by any of the various mental disturbances which are discussed below

While posttraumatic psychosis may be of many forms an elaborate classification of these is of little value Broadly speaking these conditions can be divided into (1) posttraumatic deliria ( ) posttraumatic constitution and (3) posttraumatic dementia Let us consider each of these general forms

Posttraumatic Deliria—This reaction begins during the gradual recovery from the stupor or coma produced by injury According to Meyer there exist all possible degrees of dazed and dream like states varying from mere feeling of haziness to a complete misinterpretation of the environment with fabrications and at times automatic actions The patient is confused and unable to grasp the finer points of his situation speech is incoherent memory is impaired the emotional state frequently is euphoric Aimless wandering and impulsive outbreaks which endanger the lives of others may occur Often the delirium is of an occupational type A retrograde amnesia may exist for all events subsequent to the injury The milder forms recover rapidly while the more severe forms run a protracted course of several months before complete recovery

The Posttraumatic Constitution—This condition is one of the most interesting of the posttraumatic mental sequelae Meyer quotes Koppen s excellent description of this condition as follows Men who have suffered from a cranial lesion in which there has been a severe damage of the brain with or without an injury to the cranial bones on their recovery from the immediate results complain especially of all kinds of sensations in the head which they describe either as pain or as pressure with feeling of crawling or dullness of the head more or less definitely located at the point where they were hit They frequently become dizzy and at times even faint for a short time without any epileptic attack Although slight attacks of dizziness may occur frequently, epilepsy with typical attacks need not develop There is further in our patients a great irritability and nervosity The formerly good natured or even tempered persons become irascible hard to get along with formerly conscientious fathers cease to care for their family The irritability at times increases to excessive violence in which actions occur of which they have no remembrance the nervous system is not only under the influence of psychic irritation but especially susceptible to the influence of alcohol or tobacco in even small

they are alleged to exist makes them of great medicolegal importance This is especially true of compensation and accident liability cases

A diagnosis of posttraumatic mental disorder should be based on facts derived both from a complete study and from a careful history of the individual This study should include neurological, psychiatric, roentgenological and serological examinations These should be completed before the diagnosis is reached A most careful history of the patient must be obtained from reliable sources This history should place special emphasis upon the personality make-up of the patient, together with his capacities plasticity, social efficiency and previous type of adjustment Special environmental problems which confront or have confronted him should be noted In obtaining this history it should be borne in mind that honest and well meaning persons will often make very definite statements to the effect that the individual was perfectly well before the injury As a matter of fact he may have been psychotic, or nearly so Moreover, it is a persistent and erroneous belief among lay persons that a blow on the head, even years before the onset of mental symptoms, causes 'insanity' and they invariably try to connect some trivial bump on the head with the evolution of a mental disorder

In order to indicate in a very brief form the psysical and pathological changes which accompany head injuries, we have outlined below the clinical pathological groups of injuries of the cerebrum These groups are concussion, contusion and laceration Concussion denotes an immediate loss of consciousness followed by definate neurological signs of flaccid paralysis, pallor and reflex changes Recovery from the unconsciousness occurs within the first twenty-four hours after injury Contusion also results in a loss of consciousness, which is followed by symptoms of various degrees of severity These symptoms are the result of microscopic hemorrhages throughout the brain Slight contusion is followed by headache and transitory symptoms of confusion Severe contusion is followed by stupor restlessness, confusion and occasional paralysis If consciousness is not regained within the first twenty-four to thirty six hours following the injury, the contusion is considered to be severe Such contusion may produce ganglion cell degeneration which is followed by varying degrees of posttraumatic psychosis Laceration connotes violent dissolution of the continuity of the brain tissue The injury is followed by coma or paralysis due to the tissue destruction through compression or hemorrhage Con

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Posttraumatic Delirium—This reaction begins during the gradual recovery from the stupor or coma produced by injury According to Meyer there exist "all possible degrees of dazed and dream like states varying from mere feeling of haziness to a complete misinterpretation of the environment with fabrications and at times automatic actions" The patient is confused and unable to grasp the finer points of his situation speech is incoherent memory is impaired the emotional state frequently is euphoric Aimless wandering and impulsive outbreaks which endanger the lives of others may occur Often the delirium is of an occupational type A retrograde amnesia may exist for all events subsequent to the injury The milder forms recover rapidly while the more severe forms run a protracted course of several months before complete recovery

The Posttraumatic Constitution—This condition is one of the most interesting of the posttraumatic mental sequelae Meyer quotes Koppen's excellent description of this condition as follows "Men who have suffered from a cranial lesion in which there has been a severe damage of the brain with or without an injury to the cranial bones on their recovery from the immediate results complain especially of all kinds of sensations in the head which they describe either as pain or as pressure with feeling of crawling or dullness of the head more or less definitely located at the point where they were hit They frequently become dizzy and at times even faint for a short time without any epileptic attack Although slight attacks of dizziness may occur frequently epilepsy with typical attacks need not develop There is further in our patients a great irritability and nervosity The formerly good natured or even tempered persons become irascible hard to get along with formerly conscientious fathers cease to care for their family The irritability at times increases to excessive violence in which actions occur of which they have no remembrance the nervous system is not only under the influence of psychic irritation but especially susceptible to the influence of alcohol or tobacco in even small

they are alleged to exist makes them of great medicolegal importance This is especially true of compensation and accident liability cases

A diagnosis of posttraumatic mental disorder should be based on facts derived both from a complete study and from a careful history of the individual This study should include neurological psychiatric, roentgenological and serological examinations These should be completed before the diagnosis is reached A most careful history of the patient must be obtained from reliable sources This history should place special emphasis upon the personality make-up of the patient together with his capacities, plasticity, social efficiency and previous type of adjustment Special environmental problems which confront or have confronted him should be noted In obtaining this history it should be borne in mind that honest and well-meaning persons will often make very definite statements to the effect that the individual was perfectly well before the injury As a matter of fact he may have been psychotic, or nearly so Moreover, it is a persistent and erroneous belief among lay persons that a blow on the head even years before the onset of mental symptoms, causes "insanity", and they invariably try to connect some trivial bump on the head with the evolution of a mental disorder

In order to indicate in a very brief form the psysical and pathological changes which accompany head injuries, we have outlined below the clinical pathological groups of injuries of the cerebrum These groups are concussion contusion and laceration Concussion denotes an immediate loss of consciousness followed by definate neurological signs of flaccid paralysis pallor and reflex changes Recovery from the unconsciousness occurs within the first twenty-four hours after injury Contusion also results in a loss of consciousness, which is followed by symptoms of various degrees of severity These symptoms are the result of microscopic hemorrhages throughout the brain Slight contusion is followed by headache and transitory symptoms of confusion Severe contusion is followed by stupor, restlessness confusion and occasional paralysis If consciousness is not regained within the first twenty-four to thirty-six hours following the injury, the contusion is considered to be severe Such contusion may produce ganglion cell degeneration which is followed by varying degrees of posttraumatic psychosis Laceration connotes violent dissolution of the continuity of the brain tissue The injury is followed by coma or paralysis due to the tissue destruction through compression or hemorrhage Con

meningo encephalitic adhesions and distention of the ventricles) The mental status of these patients shows a general loss of mental capacity and ability as revealed by marked alterations in the sensorium and extensive memory and retention defects Likewise there is a marked blunting of the ethical feelings frequent emotional instability and loss of judgment The neurological findings often are those of cranial nerve involvement paralyses aphasia and epileptiform phenomena

Treatment — The treatment of *posttraumatic delirii* is symptomatic All measures of combating shock are employed along with the usual methods of controlling increased intracranial pressure Operative interference is indicated if there are signs of meningeal hemorrhage

Treatment of the *posttraumatic constitution* group is symptomatic and institutional and depends upon the severity of the condition Penfield has noted marked improvement following lumbar air insufflation In our clinic we have found symptomatic improvement in the headache in 9 per cent of the cases treated by this method For the patient who shows no improvement following symptomatic treatment, we are impressed with the value of safeguarding therapy in which the patient is given the facts concerning his disability and is encouraged to return to lighter work, avoid physical and mental overexertion and refrain from indulgence in alcohol The majority of these patients are entitled to disability compensation

Treatment of *posttraumatic dementia* is predominantly institutional Patients who show features of deterioration together with changes in behavior loss of social sense marked emotional instability, changes in the sensorium and judgment defects should be committed to an appropriate mental institution

Pathology of Head Injuries

The terrific toll of lives claimed by automobile accidents emphasizes the importance of head injuries to the general practitioner Schaller and associates[67] constructed a special device whereby white rats were subjected to propulsion impact injury to the head, similar to the mechanism of head injuries frequently occurring in man in automobile accidents The severity of the trauma was regulated by the height of the fall and the effects of single as well as repeated traumas directly after the trauma and at varying intervals following the last trauma were noted They found that histological alterations in the

quantities The working capacity of our patient is very poor It suffers variously, although such individuals often give an impression of perfect capacity, and since the morbid symptoms are essentially subjective, they always arouse doubts whether they could not do something at least, even if they are unable to work in a noisy shop or on a high scaffolding It is, however, certain that the patients are very forgetful, in giving orders or doing errands they make the most incredible blunders, frequently everything must be written down Their capacity for thought has suffered, as is sometimes shown, especially in the great slowness of thought These patients are unable to concentrate their attention even in occupations which serve for mere entertainment such as reading or playing cards They like best to brood unoccupied, even conversation is rather obnoxious This point is so characteristic that it gives a certain means of distinction from simulation, which as a rule does not interfere with taking part in the conversations and pleasures of the ward and playing at cards which means as a rule too much of an effort for the brain of actual sufferers The patients are usually advised to take light physical work but even there they are perfectly useless Excessive sensitiveness of their head obliges them to avoid all work which is connected with sudden jerks, bending over is especially troublesome and there is hardly any physical work in which this can be avoided, the blood rushes to the head headache increases dizziness sets in and the work stops Patients feel best when in the open air, inactive and undisturbed There are but few objective signs such as increase of pulse, flushing of the face, dermatographia trembling and uncertainty in the Romberg position, such as is shown in all general nervosity But the complaints are so exceedingly uniform that the uniformity of the subjective complaints justifies the conclusion that they are well founded The picture thus is briefly that of a mental weakness shown by easy fatigue, slowness of thought, inability to keep impressions irritability and a great number of unpleasant sensations above all headaches and dizziness In many cases it is possible to demonstrate an organic basis for the subjective complaints of this group

Posttraumatic Dementia —This condition is characterized by outstanding organic defects and various types of emotional deterioration The degree of dementia varies greatly and on the basis of recent encephalographic studies is considered to be related to the nature and extent both of the injury and of its physical sequelae (cerebral atrophy

of the cerebral cortex not only furnished an explanation of the deficit which result from the loss of functioning areas but probably were responsible for residual convulsive seizures

Head Injury and Posttraumatic Complaints

The resemblance from case to case of certain sequelae to injuries of the head has led to the tendency to group together these symptoms in syndrome and forget the patient behind them These syndromes have been variously labeled postconcussion syndrome postcontusional state posttraumatic meningeal headache posttraumatic circulatory instability and traumatic neurosis according to the inferred cause and various rules of the thumb have been suggested for their handling As a natural fact there is no such thing as a posttraumatic headache There are only individual patients complaining after injury to the head of headache dizziness fatigue irritability nervousness and impaired efficiency or other mental symptoms In view of the fact that few complaints other than these could be made by a person who finds himself in an unsatisfactory situation after such an injury it is evident that a superficial uniformity of symptoms may cover a variety of physical disorders and disturbances in personality functioning A thorough review of the literature up to 194 has been presented by Denny Brown[10]

Ross and McNaughton[66] studied 68 patients with persisting complaints after head injury and 22 subjects observed after injury who had not presented themselves because of complaints attention was given to the type of headache The presence of items of the previous personality background suggesting instability severity of the injury the reports of electroencephalographic and pneumoencephalographic abnormalities certain ratings of instability and disability as determined by the Rorschach method and situational factors which seemed relevant to the presentation of complaints were considered

The greatest difference between the patients and the controls lay in the presence of situational factors which might have produced or aggravated the psychoneurotic symptoms This was true of every type of headache It was also evident that patients with localized headaches showed less evidence of previous neurotic background and more evidence of cerebral damage from the injury This evidence included electroencephalographic records and Rorschach disability ratings

brain produced by concussion trauma were chiefly referred to the vascular apparatus Traumatic petechiae by diapedesis, from embolic and hyaline vascular changes and hemolysis were produced in the concussed brain of the albino rat, which were in all respects similar to those observed in concussed human brains

These changes were in the main proportionate to the severity of the trauma but a considerable variation of effect was noted in different animals The vascular pathological lesions described were due to specific concussion effects and differed from contusions lacerations and tearing they were the result of vascular dilatation, stasis and anoxemia Reversible effects of concussion were demonstrated by the resorption of perivascular petechiae constantly found in recently traumatized animals but rarely observed in the animal killed at an interval after trauma Irreversible effects may be followed by demonstrable organic lesions

The pathological alterations due to reversible concussion effects involving the blood vessels and the surrounding parenchyma, were found to have a definite tendency to reparation by final obliteration of the damaged vessel and replacement gliosis There was no instance of a large secondary hemorrhagic or softening process and no tendency to progression of vascular pathological lesions

Rand and Courville [8] studied histological changes in the brain in cases of fatal injuries to the head They found that as a result of cranio cerebral trauma certain changes may result in the structure of the cortical nerve cells of the cerebrum and cerebellum These changes may be general as a result of the shock of the original traumatizing force causing chromatolysis or consequent to the generalized edema and vacuolation which so often follows such injuries in civilian life More noteworthy because of their variety in degree were those alterations which were the direct result of focal injuries of the cortex Among the various, local, cellular reactions was preservation necrosis or the retention of normal structure by dead cells Pigmentary infiltration was found in the vicinity of the traumatic cortical hemorrhage Pyknotic, ischemic or sclerotic change and lipoidal degeneration, all resulting from local circulatory disturbances, were found The occurrence of definite and widespread chromatolytic changes in the nerve cells persisted for some time before reversible changes took place The authors felt that this might furnish a possible basis for the persistent psychic residual disturbances which so often follow a cranio cerebral injury Local changes in the nerve cells observed at the margin of regional traumatic injuries

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lief that the vessels chiefly responsible for histamine headache are the cerebral arteries particularly the larger ones at the base of the brain and that the extracranial and dural arteries play a minor role in contributing to the pain in this type of headache

Friedman and Brenner[19] gave . patients with a history of headache following injuries to the head 0 1 mgm of histamine base or 0 75 mgm of histamine diphosphate intravenously Headaches were produced by this injection which in 13 patients were identical with the posttraumatic headaches in character and location and in 3 patients were strikingly similar In . patients headache failed to develop

The prompt decrease in systolic blood pressure after the injection of histamine was followed by a secondary rise which was nearly as great This rise probably was due to a response of the sympathetic nervous system produced reflexly by the primary changes incident to the injection of histamine The headache appeared as the blood pressure was rising The majority of the patients with histamine headache obtained some relief by sitting upright It is possible that the injection of histamine activates the physiological mechanism which is involved in the production of some types of posttraumatic headaches The possibility that the injection of histamine may influence favorably the symptom of posttraumatic headache is suggested by these authors

Adler[1] made a statistical analysis of 200 case with mental symptoms following head injury He found that posttraumatic mental symptoms developed after head injury in 31 5 per cent A number of extrinsic and intrinsic factors were examined in relation to the development of these symptoms Pretraumatic factors in those having a high incidence of traumatic mental symptoms were advancing age marital status in men certain national stock certain type of occupations type of injury psychiatric disturbances and pretraumatic symptoms based on anxiety Posttraumatic factors having a high incidence of traumatic mental symptoms were the initial occurrence of coma in posttraumatic amnesia certain accompanying injuries a prolonged stay in the hospital and the presence of headaches and dizziness In particular prolonged duration of headaches and dizziness was associated with the high incidence of mental symptoms Other physical sequelae of the injury lasting more than six months had an equally high incidence of mental symptoms Posttraumatic nightmares were regularly associated with additional symptoms of anxiety In addition certain environmental complications occupational difficulties in particular, problems of litigation and com

with the ratings for severity of injury and pneumoencephalographic changes tending in the same direction, although less significantly. Except for a few patients with hemicranial headache, somewhat resembling migraine, patients with all other types of headache, especially those of bizarre generalized distribution, showed previous personality instabilities similar to that of psychoneurotic patients and evidence of "instability" in their Rorschach test resembling that found for neurotic patients. The evidence for patients complaining of symptoms other than headache also tended to resemble that for neurotic patients.

A follow-up study of 82 patients with posttraumatic symptoms previously treated indicated that the long-term results with spinal or with cranial subdural insufflation have been no better than the results following pneumoencephalographic treatment and that for none of the patients could the influence of other factors be ruled out. The results in a few patients treated by direct operative procedures suggest the desirability of a limited application of such measures in carefully selected and individualized cases.

Studies of the postural vascular responses did not indicate any effect in patients with head injury which differed from that in psychoneurotic patients or in any patients convalescing from other illnesses, nor have they given any lead to treatment other than to suggest the value of exercises for hardening and relaxation.

The concept of mechanisms presented here involves a relation between physical and psychological factors and emphasizes the need of considering the person as a whole in the prevention and cure of posttraumatic symptoms.

Histamine is a powerful vasodilator of arterioles and capillaries in general throughout the body and in particular of the vessels in the brain and meninges. Pickering and Hess[2] in their experiments found that within a few seconds after the intravenous injection of 0.1 mgm. of histamine phosphate in normal subjects the systemic blood pressure fell and the cerebral spinal fluid pressure rose. While these changes were subsiding and the blood pressure was rising to normal, headache developed. Furthermore they showed that the headache might be relieved either by raising the intracranial pressure or by abruptly lowering the blood pressure.

Wolff and his co-workers[33] concluded that the mechanism of histamine headache is a stretching and dilatation of the pial and dural arteries and their surrounding tissue. These authors expressed the be

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pensation were correlated with a high incidence of posttraumatic mental symptoms

Whereas anxiety symptoms were the predominant mental features in the posttraumatic neurosis, particularly neurosis in previously normal patients symptoms of personality change only, such as euphoria, moodiness and apathy, in addition to changes in the intellectual status, were presented by 7 patients with severe head injuries

Mental symptoms, particularly symptoms of anxiety, were with headaches and dizziness the commonest symptoms in convalescence They were also the major cause of disability, particularly of prolonged disability A number of factors entered into the production of such anxiety symptoms, the most direct being reproduction of fears relating to the injury and accentuation and elaboration of pre-existing conflicts in relation to occupational and financial questions The latter factor accounted for the delay in onset of mental symptoms observed in several patients until they had recovered physically and were again faced with their obligations

Kozol[9] studied 200 cases of head injury He found that the categorical pretraumatic personality had little, if any, correlation with the incidence of posttraumatic mental symptoms There was a significant correlation between the incidence of posttraumatic mental symptoms and the existence of complicating psycho-social factors

Brain Tumor

Although mental symptoms are often associated with brain tumor, they are not pathognomonic of this condition The exact percentage of cases of brain tumor which show mental symptoms is questionable however Sachs reports that 21 out of 25 cases of frontal lobe tumors exhibited mental symptoms Henderson and Gillespie report symptoms in 60 to 85 per cent of their cases Psychic symptoms appear to be present in all cases in which the tumor occurs in the corpus callosum Approximately three fourths of frontal lobe tumors and two thirds of temporal lobe tumors result in mental symptoms

Generally speaking, the most important mental symptoms are those associated with a change in the personality of the individual In addition there are listlessness indifference, anxiety, apathy, dullness and stupor The predominating mental changes arising from brain tumors, especial

ly those of the frontal lobe are simple deterioration and apathy The individual fails to realize the nature of his condition Attention is impaired sense of responsibility fails recent and remote memory changes take place drowsiness occurs confusion arises and there appears a childish irresponsibility Many of these symptoms may be confused easily with those of general paresis At times the personality changes show weakening of normal inhibitions crude misbehavior egotistic tendencies laxness in moral sense and sex control and a degeneration of ethical feelings A mild euphoria and a tendency to pun and joke the so called witzelsucht are frequently associated with frontal lobe tumors Visual hallucinations are indicative of temporal lobe tumors The personality finally shows disorganization with irritability emotional instability and psychotic syndromes It is possible that these latter forms of behavior represent an accentuation of the previous personality type which has been aggravated by the organic defect in the brain In addition to the symptoms noted above certain symptoms are the result of the increased intracranial pressure These are fatigue lack of concentration and attention loss of interest drowsiness somnolence impaired memory for recent events confusion loss of coordination and integration and blunting of the affect

The physical symptoms are extensive They are the result of (1) increased intracranial pressure (2) location of the tumor mass (3) tissue destruction and (4) disturbance in the blood supply and nervous connections to other portions of the brain Both because the physical symptomatology of brain tumor is largely neurological and because it is so far reaching we shall not attempt to discuss it in detail It should be noted that the diagnosis of brain tumor is dependent upon the neurological rather than the psychiatric findings

Tumors of the brain have no respect for age their type may vary with the various periods of life with old age there is no guarantee against their appearance As a result of improved diagnostic methods which include opthalmoscopic perimetric roentgenographic encephalographic ventriculographic and more recently electroencephalographic examinations physicians may have to modify the concept that tumors of the brain in aged persons are relatively rare It is true that the cardinal signs of tumor of the brain are essentially the same in all periods of life although in the aged patient they may be so modified that their significance escapes detection Frequently the natural penalties of advancing years will mask the early signs of a tumor and lead

the physician to incorrect evaluation of the symptoms unless he is cognizant of the frequency with which tumors of the brain occur in aged persons

The diagnosis of brain tumor may be a difficult matter at any age When tumors occur at an age, which also included blood vessel catastrophes, the effect of syphilis on the brain and the damages of senility, diagnosis may become very difficult indeed and at times impossible If to this list of disorders are added the metastatic insults of the ill defined array of processes so common in the aged patient, the difficulties that are encountered in the diagnosis of tumor of the brain in the aged group of patients may well be appreciated

Moersch and associates[1] at the Mayo Clinic studied reports on 100 cases of verified tumors of the brain occurring among patients 60 years of age or more Eighty-six of the 100 patients underwent operations for the tumor of the brain and the diagnosis was verified by either biopsy of the tumor or post-mortem study From their view it appeared that the incidence of tumor of the brain in the aged is more common than is usually appreciated Glioblastoma multiforme meningioma and acoustic neurinoma in the order named made up 82 per cent of the tumors in their series of cases The cerebrum was the most common site of development of the tumor tumors in this region constituted 69 per cent of their cases In the posterior fossa the cerebellopontine angle was the usual site of the neoplasm which usually was an acoustic neurinoma As the result of the penalties of advancing years the symptoms assigned the tumor of the brain were exceedingly variable and at times presented difficult diagnostic problems The presence of papilledema or defects in the field of vision was an important diagnostic aid, however their absence could not be accepted as proof of the absence of a tumor of the brain Only 32 of 96 patients examined had papilledema The operative mortality accompanying tumor of the brain, although it is higher among patients of advanced years than it is in a group of younger persons probably is justified on the ground that operation might save a life which otherwise the tumor would end There is always the possibility of uncovering a removable tumor of the brain in spite of the patient s relatively short clinical history thus justifying the increased surgical risk

Newbill and Anderson[1] studied the racial and sexual incidence of primary intracranial tumors They made a statistical study of 133 cases verified by autopsy They drew the conclusion that sex and race

play an important role in the frequency of primary intracranial tumors The frequency of gliomas in white persons was approximately twice than in negroes The glioma was most frequently in white females Meningioma was approximately three times as frequent in white persons as it was in negroes The tumors which did not arise from either glial or meningeal elements showed no sexual or racial predilection

The literature is rich in valuable information on the anatomy and clinical manifestations of primary tumors of the brain It is rather poor in its yield of similar data in relation to metastatic tumors of the brain Yet the latter are not rare as shown by several reliable clinical studies in which the occurrence of metastatic tumors as compared with that of other expanding intracranial lesions is considered Thus in the Cushing analysis of 2 000 verified brain tumors[2] metastatic neoplasms of the brain constituted 4 per cent Walshe[69] gave a somewhat higher incidence of metastatic tumor of the brain his figures being 6 4 per cent and 7 7 per cent for carcinoma and sarcoma respectively in a total of 642 cases of brain tumors. Dandy gave 10 per cent as a rather rough estimate of the incidence of metastatic neoplasms among tumors of the brain of all varieties Globus and Meltzer[1] found that metastatic brain tumors constituted about 13 5 per cent of the entire collection of brain tumors encountered at autopsy at the Mt Sinai Hospital This higher incidence in their cases is probably due to the fact that their material was drawn not only from the neurological and neurosurgical services but from the division of medicine and general surgery In their series of metastatic tumors of the brain they found that the onset of the cerebral manifestations was most commonly acute and often precipitant with symptoms of increased intracranial tension such as headache nausea vomiting These symptoms appearing early in the disease manifest themselves in an intensity out of proportion to the then present meagre objective neurological signs They felt that mental alterations were found in a somewhat greater number of cases of metastatic than of primary brain tumor

The evolution of the clinical course was characterized by a rapid transition from the early stage in which the cerebral signs were few and vague to a stage in which the manifestations of existing focal lesions of the brain were prominent In a large number of instances these were of a disseminated character and in an equal number of instances pointed to the presence of a single circumscribed process

The laboratory investigations pertaining to the cerebrospinal fluid

contributed little to the diagnosis. While the cell count of the cerebrospinal fluid might at times be above normal or even be high, tumor cells rarely were discovered in the fluid. The increase in the globulin and the slight increase in the sugar content of the cerebrospinal fluid, noted in a few cases, were simply not pathognomonic of metastatic brain tumors.

It should be stated then that the onset of symptoms of increased intracranial pressure, such as headache and vomiting, followed by rapidly progressive development of neurological signs of a disseminated or more localized character, including probable development of papilledema in the absence of positive serological reactions and febrile reactions point strongly to an expanding lesion of the brain of a metastatic character. Such a suspicion demands search for a primary lesion by all available clinical and laboratory methods, since the therapeutic indications depend upon recognition of the character of the neoplastic process. Additional discussion of brain tumors will be found in Vol. VI, Chapt. VI of Oxford Medicine.

Huntington's Chorea

Huntington's chorea is a disease of middle life, familial in type, based upon abiotrophy of the brain and characterized by progressive degeneration of the central nervous system. This degeneration is shown by general choreiform movements and by gradually increasing mental deterioration. Few cases are recorded which fail to reveal the direct inheritance from parent to child. The disease occurs between the ages of 30 and 50 and attacks both sexes equally. The life expectancy is shortened ten to fifteen years. Neither palliative nor curative treatment is known at the present time.

Pathology.—Practically the entire brain is involved in the pathological process, but the essential lesions are found in the cortex of the cerebrum and the corpus striatum. The weight of the brain is decreased. The corpus striatum and the frontal area may be diminished to half their normal size. The microscopic picture shows a general loss of nerve cells in the precentral convolutions, putamen and caudate nuclei. The remaining nerve cells show diffused pigmentation throughout their protoplasm. The neuroglial elements undergo proliferation.

Symptomatology.—The onset is insidious and gradual, and the mental symptoms precede the physical signs by years. The early mental symptoms consist of absent-mindedness, irritability, outbursts of

anger slovenliness in dress hoarding of useless articles and carelessness of social conventions The patient may become euphoric irascible or destructive or he may become apathetic depressed delusional jealous or suspicious With increasing deterioration there are poverty of thought failure of memory and impairment of attention

The physical symptoms include the continuous involuntary clumsy irregular, jerky grasping movements of the head trunk and limbs The lower extremities usually are involved first Involvement of facial muscles results in grimacing involvement of the tongue lips and respiratory muscles in explosive stumbling speech involvement of the legs in a dancing shuffling type of gait The choreiform movements cease during sleep These movements become worse when the patient wishes to perform some act For example swallowing is impaired when the individual desires to swallow and the voluntary movements become irregular and incoordinated when the patient gives thought to their performance With progression of the disease, the patient becomes bedridden and finally succumbs to intervening diseases Huntington s chorea is discussed also in Vol VI Chapt XI of Oxford Medicine entitled Diseases of the Basal Ganglia and Subthalamic Nuclei

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CHAPTER VII

PARANOIA AND PARANOID CONDITIONS

By William A. White

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The Term

The term paranoia is a very old one dating back to the period of Greek medicine where it was used by Hippocrates in its literal significance namely to mean what we mean when we use such a generic term as madness. The history of the term since then naturally contains in miniature and condensed form the history of the development of the concept as now used except for the fact that for a considerable period the word went out of use to come back during the Middle Ages. It was revived in the early nineteenth century by a German psychiatrist and has been in constant use since that day. The significance of the term however has become more and more restricted. From having such a broad connotation as madness it came by a process of continuous differentiation to be applied to more and more restricted forms of mental disorder until now it is used generally in the sense which Kraepelin gave to the term namely as a chronic incurable psychosis of insidious origin slowly developing by the gradual systematization of delusional ideas of endogenous formation. This system of delusional ideas is enduring and unshakable and exists along with retention of the logical and orderly process of thinking apart from the specific delusional regions. There is no marked tendency to mental deterioration dementia. This in a few words is a description of paranoia as it is now conceived but it will be necessary to elaborate very considerably

upon this description in order to understand the disorder and also to understand the conditions to which the term "paranoia" has been applied in the past or to which the adjective "paranoid" is applied at present.

The conditions to which the term "paranoia" has been applied in the past have been named variously in the different languages. Thus in German we have the term '*Verrücktheit*', in French the terms "*folie systématisée progressive*", '*délire chronique à l'évolution systématique*' and "*folie raisonnante*", while in England the terms "monomania" and 'chronic delusional insanity' were applied more nearly to the condition than any others. Aside from these terms we have the French "*délire d'interprétation*" and "*délire de revendication*". In the course of the history of the concept many other terms have been in use, some of which will be referred to further on.

Causes

With our present very restricted knowledge about the etiology of mental diseases in general and of paranoia in particular there is very little to say at this point except to call attention to the fact that it is rarely an adequate explanation of a disease to speak of it as either hereditary or acquired. We should think rather, as Bleuler has expressed it, to what extent is the disease hereditary? to what extent is the disease acquired? — for no characteristic of the organism is solely one or the other. Hereditary potentialities can only be made actual by being brought into existence by suitable and adequate stimuli. Undoubtedly we have patients in whom the hereditary factors are largely in evidence while equally undoubtedly there are patients in whom the experiences of the individual during his lifetime, namely, the environmental factors are especially prominent and perhaps of more significance. This distinction is an important one here as in any other region of mental disorder especially from a prognostic and therapeutic viewpoint. Naturally where the hereditary factors are strongly in evidence the outlook is not so promising. When the opposite state of affairs maintains it is, theoretically at least, much more possible to accomplish something in the way of modification of the disorder in the direction of more normal types of functioning.

Description

The outstanding features of paranoid symptomatology, when in full bloom, are the delusions of persecution. The difference between a delusion and an ordinary mistaken idea is a quantitative one, and in going back in the history of these people we may easily find that in the early years they were not delusional in the ordinary sense but exhibited a rather suspicious nature, a tendency

to put the worst construction upon things Especially were they suspicious of other people thinking that they were trying to place them in some way at a disadvantage Such suspicious tendencies or paranoid trends as they are called or paranoid character types are well known They are seen for example in all large groups of employes where conceivably the recognition and promotion of any particular employe is dependent upon the whim of a superior officer Under these circumstances it is not infrequent to find that individuals suspect their associates of undertaking to influence their superior in a way that will result to their detriment and as a result all sorts of innocent and fortuitous circumstances receive importance much greater than their due As time goes on the tendency to mere exaggeration becomes an actual tendency to distort and situations which have a perfectly obvious and innocent significance the future paranoiac twists to mean that sinister influences are at work against him Innocent remarks are interpreted in this false way Notes that are passed from one person to another are felt to have some personal detrimental significance Comments and glances sometimes of strangers passing by are again interpreted in this same distorted way and we have the beginning of delusions of reference as they are called which are false beliefs of the patient that all of these various occurrences have reference to him and of course in a derogatory way Then there follows a further elaboration of this delusional system involving disorders of memory so that the patient begins as he looks back in his life to seek for an explanation as it were of these various occurrences to read the past in terms of his present experiences and to remember things that prove his point Of course he remembers things that are not so in the sense at least that they are distorted memories and so these retrospective memory falsifications still further reinforce his false beliefs

In this way there is gradually built up a delusional system which becomes as the days go by further and further elaborated until it is highly complex and octopus like reaches out into every nook and corner of his mental life This set of delusions is said to be systematized by which it is meant that the ideas are logically related to each other that they are considered as realities in that the patient conducts his life in accordance with them and with the assumption of their reality and that he defends their truth with such capacity and ability as he has against all arguments and proof to the contrary In addition to this we will find if we look hiding behind every such system of persecutory ideas a more or less well defined feeling on the part of the patient of undue importance amounting at times to grandiosity This may be very little in evidence in fact in evidence only by implication or it may be a very definitely obvious part of the symptomatology For example the persecutors may be simply as described above the associates of the individual who are trying to outdistance him in the favor of a superior officer on the other hand the persecutors may

be secret societies, religious or other organizations They may be wide flung over the surface of the earth so that anywhere the patient goes no matter where, he is subjected to the same persecutions Obviously a person, who is persecuted by so many people in so many parts of the world and so continuously and by individuals in high positions and with so much power, must on his own account be a superior sort of person He must represent a danger to these people because of his potential capacities They may want to get rid of him because he is the rightful heir to a great fortune which is being disputed, or to a throne or some other high and mighty position On the other hand, the patient himself may in his delusional system aspire to these great positions and overtly announce that he is such and such and is entitled to such distinctions and considerations, and thus the delusion of personal grandeur, the ego inflation of the individual, is seen in different cases in different stages of development

These individuals who develop in this distorted fashion are generally speaking, people of rather superior qualities in many ways If we should seek for the Simon pure variety of paranoia in the public institution for the "insane" throughout the country we would find very few This is due partly to the fact that the disease in pure culture is probably not common When we consider the great number of people who have the makings of paranoia, the paranoid personality, the suspicious individuals described above, it seems that there must be a great many more paranoiacs than at least our statistics would lead us to suppose However the fact that they do not get into institutions, or if they do get there get out again, is one of the evidences of their rather superior qualities and one of those qualities is the special one of their very great energy, their continuity of purpose and their persistence in the face of all obstacles in gaining their point and making their ends It is not an uncommon thing to see such a patient work all day every day of a long lifetime to accomplish certain ends which he never attains and die finally with his hope undimmed and his convictions undiminished When to this is added the fact that these patients are quite frequently, well endowed intellectually that they are capable of supporting their contentions by logical argument free from the sort of distortions which are convincing for example, to a lay jury or even to an experienced court, that they have a "case" which they can expound and interpret interminably and everlastingly and document by evidence from all sorts of sources, that they have an astonishing memory for the most minute details both of things that happened and of things that did not happen but all events which go to prove their contention, then it is understandable that if you undertake to refute these people on their own ground it is an impossible task You are, so to speak beaten before you start

The content of the delusional system varies in different individuals

Roughly speaking however cases may be divided as they have been into *in entire reformatory religious* and *erotic* varieties These do not exhaust the possibilities by any means but it is more common perhaps for patients to believe that they have made some important invention such as perpetual motion elaborated some highly significant social reform which needs to be brought about in order to save society from disintegrating developed some religion which is calculated to save mankind or have fallen in love with some important personage or on the other hand have had some such important personage fall in love with them All of these various types are fairly well known but as will be seen later the mechanism involved in all these situations probably is fundamentally the same and it is perhaps only by an accident of experience that the content takes on one or the other particular color In addition to these varieties those cases where the persecutory element is most prominent are ometimes known as *persecutory paranoiacs* those where the expansive element is most prominent are known as *expansive paranoiacs* while those who undertake to prosecute some claim through the courts and spend their lives in projecting multitudinous law suits belong to the so-called *querulous or litigious variety of paranoiacs* On the other hand we have the so-called *early or original types* and the *later or acquired* by which is meant in the early types that the character in the very early stage evidences paranoid trends whereas in the later types these do not seem to have been originally present but to have been acquired later in life

Interpretation of the Psychosis

An understanding of the psychosis based upon its meaning has been impossible in the past The description as outlined above has been the usual way in which the disease has been treated About the only thing that could be said with regard to a disease of such a description that would be explanatory and helpful in understanding it is that the individual patient for some reason or other finds the world in which he lives unsuited to him His desires his aspirations his hopes and his wishes are such that he is unable to get along within the world of reality which imposes the restrictions upon him which this world we live in necessarily does *He feels the necessity for overcoming for transcending these restrictions* He can not do it in the world of reality he can not succeed if he is forced to play the game as everybody else does and so *he resorts to the alternative method of creating a world for himself* not a real world but a world of phantasy but if it is not real it nevertheless has those characteristics which enable him to live in it at comparative peace with himself In this world of phantasy which he creates he attains to great eminence in one field or another He becomes a great inventor a social re

former, a religious prophet with a large and enthusiastic following He is the affianced of some beautiful and wealthy aristocrat He is thoroughly pleased with himself in all of his own qualities, and if he does not bring to pass the final act which will crown his life with success, it is not his fault, it is because he is interfered with by his persecutors and he can still, as it were, save his face, believe in himself and be proud of his accomplishments even though he fail, a rather ingeniously devised bit of machinery, carefully constructed, with which to meet the 'slings and arrows of outrageous fortune' in a way which will be relatively, at least satisfactory and successful despite all the handicaps with which he is surrounded, all the obstacles which he is unable to overcome This explanation is all right so far as it goes, but it is not sufficiently detailed In order to understand still further the mechanism of this rather extraordinary disorder, let us take up in this discussion some of the particular aspects of it

In the first place, it will be noted that for a long time in the English literature diseases of the character of paranoia were referred to either as monomania or as chronic delusional insanity The implication of the term "monomania, at least as it exists in the lay mind was that an individual could be crazy on one subject and as transferred to the terminology of psychiatry, was expressed by the designation circumscribed psychosis' If for example, an individual claimed that he was the rightful heir to a particular estate and that he had been cheated out of his estate by the acts of some person or persons who were his enemies and who had gone into court and by various dishonest methods had secured a judgment in their favor against him, on the face of it it would seem that we are dealing with a very circumscribed, limited set of delusional ideas, and when you talk with such a patient and discover that in ordinary conversation he is quite clear is capable of expressing himself as well as the next one, with a good memory a good educational background and all the rest of it, we are inclined to take the same view, namely, that the patient is crazy as it were, in a certain aspect of his mind and sane with reference to everything else The description thus far of the disease, if it is read carefully will however indicate the negation of this idea In the first place, such delusional systems do not arise in everybody They only arise in people who are peculiarly susceptible to such types of delusional interpretation, and the individuals who are susceptible to such types of delusional interpretation, are people who have difficulty in getting along in the world and who need, therefore, some sort of excuse for building up a phantasy, delusional world which is more to their liking It will have been noted too that the individual who has these persecutory ideas will disclose if his mind is queried sufficiently that back of these ideas and for the purpose of compensating him for the inefficiency which made them necessary there lurks a feeling of superexcellence, of more than usual ability He is more than likely to look with disdain upon the accom

plishments of his fellows and associates to consider that after all they are quite beneath him in ability In addition to that and probably more convincing if one will take the pains to spend some considerable time in inquiring into the foundation of these ideas and in requesting the proof of the details upon which they rest one will sooner or later discover the fact that the foundation is quite apt to be childish naive inconsequential and that even at times when the individual is pushed pretty hard for an explanation he may sidestep the explanation altogether and resort to some trick of changing the topic of conversation evading the issue or giving some wholly irresponsive answer to the questions As logical as the whole structure seems to be as well supported as it is so long as the patient is permitted to tell his own story as soon as this story is probed by an inquiring informed and observant individual it will be seen that the story really is built upon a very fragile and uncertain foundation

The above discussion naturally leads into another closely related field of importance and significance It has been generally taught now for some time past that the whole domain of mental disease was one in which the emotions figured largely and the intelligence very little In other words with reference to the particular disorder that we are discussing paranoia which was at one time considered a disorder of the intelligence because of the delusional elaborations which were considered as intellectual distortions no longer is thought of in that way It is believed that the fundamental disorder is emotional in origin and that the intellectual aspects of the disease in other words the delusions are explanatory of the feelings or rationalizations of the state in which the patient finds himself as interpreted by his feelings If he feels suspicious and suspiciousness is considered as a feeling then he has to elaborate some reasonable explanation to account for it etc Now my contention is and has been for some time past that the intellect and the emotions are no separate things They are no more separate from each other than are night and day and perhaps also they are just as separate by which I mean that one can not exist without the other that they are both merely aspects of a psychological experience that they go together that it is impossible to have a highly developed intelligence and the opposite state of affairs with reference to the emotions or vice versa with regard to the same thing the same situation the same aspect of mental life Thus I believe if we consider that the paranoiac is childish in certain aspects of his emotional life when he feels that he is imposed upon he is acting something like a naughty child who has been denied a penny for some candy If we feel that way about him and will then undertake to discuss with him certain intellectual aspects of this situation we will find that his intellectual attitude is just as childish as his emotional one and the reasons he gives as I have already indicated are in harmony with the feelings that he has As it has been stated in the past the emotions which

are involved in the paranoiac elaborations are rather the primitive emotions As Bianchi says, suspicion, ambition, love these three primitive emotions characterize the three classic varieties of the disorder, the persecutory, the ambitious and the erotic In the same way we find that, as these emotions are primitive, the intellectual reactions based upon them are also primitive

For example, the following case illustrates the points above mentioned White male, 63 years of age, was admitted April 6, 1910, on a certificate which stated that the patient was taken to the Washington Asylum Hospital on March 7, 1910, saying he had been hypnotized, and that $36,000, which had been sent him by a firm in Philadelphia, had been stolen from him He had been in what he called a hypnotic state and had attracted considerable attention in the city While he was in the Washington Asylum Hospital, he wrote out in detail his life history Briefly summarized his history shows that he has grandiose ideas, which are based upon what he claimed was an original discovery with him namely, getting gold out of sea water, and also extracting gold, by his special electrolytic process, from auriferous quartz He claims he has made fabulous sums by these means He has travelled, according to his statement, over the greater part of the world, says the Jameson Raid and the Boer War were the results of the British Government attempting to stop his company's production of gold, which was demoralizing the gold standard He gives in detail in the history various experiences connected with his delusions which are evidently falsifications He states that twice he has had a period of loss of consciousness once in 1896 for six months and recently, before his commitment to the Washington Asylum Hospital His first period was caused by a blow on the head inflicted by his enemies in order that they might secure his bank books which contained a record of his enormous holdings in various banks in New York, which money he had secured through his gold producing efforts Each time he was brought out of his period of loss of consciousness by a hypnotist named Mark Tracey, but what connection Mark Tracey had with his previous life has not been elaborated by the patient For the past three years he has been endeavoring to form a dairy company for the production of desiccated milk which he claims will prevent the sicknesses of children which have been dependent upon impure milk In connection with the formation of this company he came to Washington to purchase various farms He gives in detail all his experiences and interpretations in his autobiography, a voluminous document consisting of many closely written pages. An examination however shows that he has but a meager knowledge of the places he claims to have visited and it is evident that he has acquired his knowledge by reading He is rather an eccentric looking man small, with long hair and shabby, worn out clothing He is very quiet has not been talking about his ideas with the other patients, but has a few times casually

mentioned them to the physicians when questioned regarding them he is composed talks in a moderate tone and would not impress one as being especially egotistical The ideas however are firmly fixed and he can quite readily elaborate them There is no evidence of mental reduction

It will be seen that this man among other things had an invention for getting gold out of sea water This invention naturally was a very valuable one worth really fabulous sums of money to the man who could own and operate it It was in order to get this invention away from him that he was followed by his persecutors all over the world for many many years Now the interesting thing here is that while this man was perfectly clear mentally in the ordinary sense of that term was perfectly capable of supporting his delusional system by argument had traveled extensively largely because of his persecutions and had for the most part kept out of any serious trouble and been able to take care of himself still if we examine the nature of his invention I think we find certain significant things In the first place the simplicity of the invention attracts our attention Everybody who knows anything about the composition of sea water at all knows that there is plenty of gold in sea water but almost everyone also knows that it costs several dollars to extract every single dollar of gold that the sea water contains and therefore no one from the standpoint of our present knowledge of its composition and the means of getting it out has undertaken to do this particular thing on the basis of an industrial experiment But this man apparently has overcome all those impediments and he has invented a ship which is propelled through the ocean by ordinary steam power but which has in its center an endless chain of buckets which dip up the sea water as the vessel proceeds and as the sea water is raised by the buckets it is discharged into a sluiceway which causes it to run over galvanic plates These plates extract the gold from the sea water and the gold is then recovered from the galvanic plates at a great commercial profit The whole idea in its conception and elaboration is as simplistic and naive as any idea a school boy of ten years of age would produce when he is phantasying and reducing his phantasies to his slate And it is not strange that in the field of this delusional system this man s conduct should be as simplistic and little elaborated and that his whole life should be as badly adjusted as his nuclear idea of what for him constitutes success in this world It is noted too that even with all these things in his favor with his lack of judgment and adequate critique he is still forced into the field of memory falsifications for he states and I have no doubt quite honestly that he has already made fabulous sums by this means No doubt his idea of hypnotism is quite as childish and probably his idea of preventing the sickness of children by his method of producing desiccated milk is worked out with just as little adequate elaboration We see therefore a man who on the face of it seems to be perfectly clear well

oriented and logically coherent, who represents, when we come to the sizing up of the total situation, a really very childlike, undeveloped type of personality

The outstanding mental mechanism, which is operative in paranoia is the mechanism of projection Projection and its opposite, introjection, are found under normal conditions but when operative in an exaggerated or distorted fashion are symptomatic of the psychoses Just as food can be taken into the body for its nourishment, so may ideas be taken in and become part of the psychological equipment This is introjection Its opposite, projection is the mechanism by which ideas and feelings are expelled, as it were and seem to become a part of the environment instead of being a part of the self We are familiar with the man who breaks his golf club because he makes a bad shot, thereby projecting his own inadequacy upon the stick and destroying the stick This is a simple illustration but the mechanism itself, together with its opposite introjection date back in the history of the growth and development of thought to very primitive times when the individual, savage or baby as the case may be, is unable to distinguish between himself and the environment. In the animistic period of civilization the savage projects his own human characteristics into surrounding nature, which thus becomes animated alive and possessed of human tendencies In the same way the baby is unable to distinguish at first between objects of the environment and himself and the first weeks of babyhood are made up of experiments that enable this distinction to be made Therefore we see in the mechanism of projection an exceedingly primitive function so far as the fact of its early origin is concerned, and in paranoia it is this mechanism that we find developed especially, and we shall see what purposes it serves

In the first place the projection mechanism is essentially and fundamentally a method of defense Just as the golf player above referred to by his childish conduct in breaking his golf club prevents the painful recognition of his own inadequacy as a player so the mechanism of projection saves the individual from a similar recognition of his deficiencies whatever they may be It is a broadly used mechanism therefore, not only in paranoia but in various other conditions and the state of mind of the individual who resorts to this method of defense is termed "paranoid", whether the psychosis may or may not be a true paranoia Thus we see characteristically not only individuals protecting themselves from the realization of their own inadequacy, for instance their own business inadequacy by developing a belief that their failure results from the interference and dishonesty of others but we find them characteristically projecting their own peculiar disabilities upon other individuals It is quite common to find that the patient who suffers from these symptoms and who bitterly denounces other individuals as being responsible, himself exhibits the

very characteristics which he thus denounced in others In this way the projection mechanism is used as a means of excretion symbolically speaking by which the individual endeavors to rid himself of those emotional states and disabilities that give him so much discomfort We see a similar mechanism at work in hypochondria which is not infrequently associated with paranoid states wherein the patient centers his feelings about some organ or organ function and in the last analysis not infrequently by his constant complaints induces some surgeon to remove that organ This has happened many times, and sometimes unfortunately when there was no pathology apparent in the organ concerned Naturally therefore it will be seen that this mechanism is of tremendous importance in general medicine and doubtless has led to much needless surgical mutilation

Another important way in which the projection mechanism serves the patient is based upon the fact that the human organism has ways and means of fighting or fleeing from dangers which threaten from without On the contrary dangers that threaten from within feelings of anxiety apprehension, guilt can not be run away from. This is also a very important conclusion for general medicine because ocean voyages trips to Europe summer vacations can not relieve the patient of conditions that are of internal origin By the mechanism of projection however the internally originating discomfort is projected and seems therefore to come from outside and then the patient mobilizes those methods which are suitable to dangers of external origin and he either fights or runs away And so we have on the one hand the litigious paranoiac who spends his life in conducting law suits, mobilizing his aggressive tendencies by means of the law and the courts or on the other hand we have such an example as the case cited above who spends his life in avoiding and running away from his imaginary enemies

The most notable contribution that has been made to the understanding of paranoia has come by way of the psychoanalytic school In order that we may understand this it is necessary to preface the interpretation by a brief comment upon the course which the psycho sexual development takes from early infancy to adulthood At the risk of speaking anthropomorphically it might be said that Nature's object at least one of her prime objects in the development and growth of the individual from child to adult is to prepare that individual for the function of reproduction so as to ensure the perpetuation of the race In early infancy it goes without saying there is very little indication on the surface at least of the possibilities in this direction The child is completely bound up in interests which can be best expressed by calling them self interests the important problems that confront him the awakening and the development of the function of the special senses which have for their principal duty the exploration of the environment and the bringing as it were to the child the

data upon which he can at first adequately separate himself from the environment and subsequently learn about that environment. In other words the child is nearly one hundred per cent egocentric in his interests. Later on his interests begin to spread out to those about him, particularly to those who at first come in intimate contact with him and for whom he learns to have love and affection because they serve his needs. The child may thus be spoken of at first as being primarily in love with himself, that is, all his love or creative interests are centered upon his own person. As soon as it is possible to become interested in someone else, that interest is most apt to take the form of interest in a person most like himself, a person of the same sex, and only later in the course of development do we find an interest in the opposite sex as a definite development. The interest in the same sex is, as it were, a bridge from self interest to interest in others along the pathway previously mentioned. This interest in those of the same sex may be spoken of, if it is understood in the sense in which it has been explained, as a "homosexual" interest, that is literally interest in those of the same sex.* Now the fundamental background of the paranoiac is believed by the psychoanalytic school to be homosexual, that is, there is a defect of development in this particular sector of the personality. This homosexual interest is never given up entirely in normal life, for if it were, it would be impossible to form enduring friendships with those of one's own sex or to carry on together in committee meetings, clubs, athletics, etc. In these individuals there has been a defect, which is due either to an over emphasis and over development at this stage of progress or else to a frustration and regression from the next heterosexual stage so that the individual failing in the next adjustment, falls back or regresses to the previous stage of development. Under these circumstances the psychic energies which are referred to by the psychoanalyst as the "libido", animate or reanimate, as the case may be, these homosexual tendencies.

To put the matter very simply and to use the male as the example, the future patient is very much interested, let us say, in Mr X. Mr X is entirely unaware of the nature of this interest and therefore does not respond. The paranoid tendency then, instead of reacting in a normal way, feels that lack of response not only as a definite disappointment but as an actual psychic pain and also feels this sense of discomfort, pain and frustration as emanating from the other individual. The drama of the frustrated affection takes place within the emotional life of the patient and is interpreted by him as if something painful were being experienced which had its source in another individual. The projection mechanism here, as already described, protects the host from realizing that the real difficulty is with him, a realization that would be only too

* The prefix "homo" is derived from the word meaning "the same" and not, as is usually supposed, from the word meaning "man".

painful because of the social taboo against any such feelings He therefore projects them upon this other person and then can feel a righteous indignation about the injustice of his treatment and react accordingly The psychoanalytic formula has been ingeniously set forth by Professor Freud by ringing the changes supposing the patient to be a male upon the basal sentence I love him thus Delusions of persecution contradict the verb I love him is resented by the individual who reacts to the feeling by I do not love—I rather hate him Then this feeling of hate is projected with the result he hates (persecutes) me which justifies my hating him As a result this feeling appearing to come from an outer conception becomes I really do not love him — I hate him — because he persecutes me

Erotomania contradicts the object I do not love him — I love them then I notice that they love me then finally I do not love *him* — I love her — because she loves me

Delusions of jealousy contradict the subject Not I love the man — she loves him

Delusions of grandeur result from a total contradiction — a rejection of the whole sentence I do not love at all and hence I love nobody As the libido must be accounted for this is equivalent to I only love myself

Freud has stated that the persecutor represents someone whom the patient at one time held in great affection and then owing to the mechanisms as outlined the homosexual object of affection is reinvested with unsublimated libido and the ego guards against a recognition of this process by means of the projection mechanism Even in those instances where this does not seem to be true analysis indicates that it is for example in the delusions of jealousy where for instance a man is jealous of his wife and where as is so often the case in the structure of delusional systems *no* foundation at all can be discovered to warrant his jealousy That is no little act which in an exaggerated and distorted fashion would account for the jealousy can be discovered Here it would seem as if the above formulæ of the psychoanalyst were contradicted because the persecutor now is a member of the opposite sex But analysis of such instances has shown that the real interest in the situation is not as it appears upon the surface but rather the interest of the husband is in the alleged paramour of his wife and that his attitude toward the wife is merely one of those disguises developed for the purpose of protecting himself from the realization of the actual state of affairs.

VARIETIES

The main varieties of paranoia based upon the content of the delusional stem and dependent upon the emphasis placed upon the primitive emotions

have already been referred to, namely the inventive the reformatory, the religious and the erotic varieties From the descriptions thus far given it will be evident that these varieties depend for the details of their content upon the personal experiences of the individual, and therefore, these details are more or less incidental to the fundamental mechanisms In addition to these varieties as thus far set forth, there have been described in the past acute forms of paranoia of comparatively short duration and followed by recovery These probably however, for the most part, if not all of them, belong in other categories of mental disorder Many of them at least are paranoid pictures developed as part of the symptomatology of the manic-depressive attack Similarly Professor Kraepelin originally in his description of dementia præcox described a paranoid form, which form was distinguished from paranoia by the fact that its course led to a progressive deterioration Since then and in the last edition of his book Professor Kraepelin has created a new group namely, paraphrenia which includes the dementia paranoides which was formerly included in his dementia præcox classification together with certain other paranoid states which do not show the characteristic disorganization of the personality that one is accustomed to see in dementia præcox In other words, the main disturbance appears more obviously in the intellectual field This group therefore occupies a mid position between paranoia, as above described and the paranoid types of dementia præcox and is divided by him into four divisions paraphrenia systematica, paraphrenia expansiva, paraphrenia confabulans and paraphrenia fantastica

As will be noted a little later on, we in the experience of our Saint Elizabeth s Hospital material believe that all these paranoid groups are closely related so that we prefer on the whole to classify all these paranoid reactions together irrespective of whether they are included as pure paranoias or as varieties of the dementia præcox type of reaction The clinical fact is that there are all degrees of the paranoid type of reaction from the point of view of course and outcome in deterioration The outstanding symptom of dementia præcox is the so-called splitting of the personality, which gives rise to the possibility of a patient entertaining two mutually opposing attitudes at the same time For example one of my patients would write me from time to time telling me what a wonderful man he was, how he owned most of the buildings in Washington, the great sums of money that he had at his disposal the great power he possessed in one way or another, and he would wind up his letter with the simplicity of a child and beg me please to let him out The outstanding sign of this splitting of the personality is generally considered to be the hallucination of hearing the hallucination expressing one aspect of the personality and the usual conduct and thinking of the patient representing the other And so correspondingly, we find in most of these paranoid conditions

varying degrees of severity of auditory hallucinations until we get to the Simon pure variety of paranoia which usually is conceded to be without evidences of sensory falsification Thus we see that we have paranoid states or paranoid types of reaction running all the way from comparatively normal individuals who are somewhat over suspicious but quite competent and capable of getting on in the world by their own endeavor to the pure variety of paranoia on the one hand with its systematized delusions of persecution and the dementing variety on the other with the dilapidation and disintegration of the personality

The following case illustrates the type of paranoic elaboration which usually would be called dementia paranoides and shows the beginning appearance of auditory hallucinations together with gross misinterpretations of the conduct about him as he observed it On admission to this hospital the patient a male age 32 years was well oriented in all spheres showed no clouding of consciousness was neat in appearance and tidy in habits took a normal interest in his surroundings assisted with the ward work and adapted himself readily to his new environment He showed no disturbance emotionally as a rule but when the subject of his sojourn here was broached he worked himself up into a slight passion He gave evidence of being slightly suspicious and on one or two occasions exhibited delusions of reference He elaborated a fairly well organized system of persecutory delusions in which many people were involved among these some high officials in the Army and the Navy and this delusional system took its inception in the latter part of 1908 while the patient was a member of the Seamen s Gunners Club at Washington D C He claims that the first trouble started through the instigation of certain false accusations by fellow Masons that the men at the class tried in every way to make life miserable for him that he had heard them call him various unmentionable names with a view to blemishing his character On one occasion they administered to him an overdose of iron quinine and strychnine on another they tried to poison his food They refused to eat with him at the same table had detectives watch him etc He says that back of all this stood some high officials of the Navy and the Army that he saw one of these give the sign to the other man to torture the patient that the reason these officials had them persecuting him was the fact of the patient s invention of some dirigible aero torpedoes with proper detonators and these officials stole the patent from the patient and then sold it to the combination of three European countries and it was to their interest to get rid of the patient in some way in order that he should not expose them as he had knowledge of this treasonable transaction

It will be seen in this illustration how the elaborations of the delusional system diverge further and further from the realm of the probable and become more and more fantastic until they take on the character that we find more

usually in the dementia praecox type of reaction As the deterioration progresses the thought becomes more and more grotesque takes on more fantastic qualities of omnipotence and magical powers and develops more and more a a result of regression and incapacity on the part of the patient to distinguish himself from his surroundings So that with all of these primitive and child like qualities and the wiping out of the boundaries of the ego, there is a loss of the sense of personal integrity and definiteness until the conversation of these patients takes on the characteristics that make it seem one of complete confusion and incoherence As a matter of fact, of course, this is not so The confusion and the incoherence is because the psychosis represents a stage of development, which we have left behind and have no longer the capacity to interpret and understand

Pathology

Paranoia, so far as we know, has no definite, circumscribed, cerebral pathology In fact in this respect and in the present state of our knowledge it is very much like other mental diseases except those that are dependent upon either trauma or infection If we bear in mind that the personality pattern of the individual is not a matter simply of cortical anatomy and physiology but is an expression of the total organism, which is expressed so far as the behavior and the language of the individual is concerned by and through the nervous system as the final integrator, then we will realize that when we have to search for the pathology of mental disease we have to think as well of an extra neural pathology as of a pathology of the central nervous system it elf So far, even with this assumption we know very little about the pathology of such a disease as paranoia We have however in our Saint Elizabeth s Hospital material some very interesting and instructive leads which give us some idea of the direction in which ultimate research may disclose important findings not only in this mental disease but in mental diseases in general For example, whereas paranoia was in the old days ordinarily spoken of as a disorder primarily of the intellectual sphere and came later on to be conceived differently along the lines already described from the point of view of pathology there is still a further step to be taken It will be recalled that in the description of the disease it was stated that the individual because of certain defects of development or otherwise found adjustment to the world of reality too much for him, and that instead of simply giving up and collapsing and deteriorating he was sufficiently well circumstanced mentally to make an effort to circumvent his fate and he did this by creating in phantasy a world in which he could live in comparative security and peace at least with sufficient self satisfactions to make life endurable This was brought about by the development of a delusional system

which had the effect of making up for his deficiencies If he was ignorant in reality in his delusional system he was omniscient If he was weak in reality in his delusional system he was competent If he was lacking in virility in reality the beautiful and wealthy women of the world sought his favors etc etc So from this point of view paranoia may properly be considered as a compensatory psychosis in the sense that the mechanisms evolved at the psychological level have essentially as their function the compensation of the individual for certain deficiencies in his make up

Now it is interesting to note that a study of the deaths in the whole paranoid group in which I include not only the pure paranoias but those allied states that have been discussed and the paranoid states in dementia praecox shows that death occurs in by far the larger number of cases from circulatory disorders malignancies and chronic treptococcus infections all of which we regard as compensatory types of tissue reaction The significance of this can be still better understood if we take the type of mental disease which is just the opposite namely dementia praecox from which the paranoid cases have been excluded and realize that here we have the type of individual who passively as it were submits to his fate and deteriorates Here the preponderant number of deaths are due to active tuberculosis and intestinal catastrophes such as intussusception for example types of tissue reaction which we regard as essentially decompensatory In other words such pathology as this for the most part extra neural is the pathology of the constitutional background upon the basis of which the paranoid mechanisms are erected To the extent that these paranoid symptoms are conditioned by the experiences of the individual so far as I know there is no pathology In other words we know that certain inadequacies of personality make up which I have referred to as presenting childlike characteristics of conduct are dependent upon deficiencies of development These are expressed in the tissue pathology as I have indicated Whether however a given individual presents the delusion that his persecutors are the Catholics or the Masons or the members of the military establishment or whether his superiority is expressed in the delusion that he has made a great invention or formulated a valuable social reform or founded a new religion all of these details are details which have no specific pathology Such patients will only show on study the defects in constitutional make up

The fundamental principle here which I take it is of general application is that the organism is not merely a sum of its separate parts its tissues and organs but in addition and much more important particularly for all matters of psychological and psychiatric significance it is the relations between these organs these tissues and their several functions that are of significance and inasmuch as these relations are intangible we can hardly expect a pathology which will be disclosed by the microscope

Prognosis

The prognosis of paranoia, as implied throughout this discussion, is uniformly bad The disorder has a tendency to progress, the delusions to be more and more widely flung as time passes and to become more firmly fixed and unshakable In those acute forms, which are recorded as recovered and recoverable, it is probable that we are dealing with variations of the manic depressive picture In those forms which lead to progressive deterioration we are dealing with dementia precox In many of the mild forms, which show little or no tendency to progress and are without outstanding delusional formation but show just hypersensitiveness and suspiciousness, we are dealing with what would ordinarily be called character types In a recent extensive work Lacon has described what he terms a ' paranoia of self punishment which has a favorable prognosis In general it may probably be said here as elsewhere that to the extent that the constitutional make up is involved the prognosis is serious to the extent that the paranoid symptomatology is based upon actual experiences it is possible to hope for amelioration or cessation of the symptoms Cases of this latter sort are frequent especially, as already indicated in large organizations where individuals feel that they are discriminated against in the military forces for example, where an individual may be court martialed perhaps mistakenly so that he is unjustly punished or separated from the service Such experiences may easily especially in a predisposed person, precipitate a paranoid symptomatology, if the constitutional background is favorable

Treatment

As will be expected from our discussion of this disease, the treatment is not very satisfactory In the cases that get well such as the manic depressive psychoses, the recovery is spontaneous, whereas in the other cases referred to there seems to be little chance of recovery and little prospect of help from any form of treatment However the tendency is to consider these serious conditions more hopefully than in the past because we are beginning for the first time to have some understanding of the mechanisms which bring them to pass and so at least we can make attempts at therapy that are more intelligent than the attempts that have been made before The only form of therapy which has been advocated in these cases as being of any value, is psychotherapy Since psychoanalysis has become pretty well an accepted form of treatment for all sorts of mental disorders, the psychoanalytic technique naturally has been brought to the service of this problem it must be said however, with not very satisfactory results It has been pretty well recognized for some time

that the treatment of the real paranoiac is not only exceedingly difficult but it is not without its dangers The delusional system must be recognized not just as something that is abnormal but as the result of an effort on the part of the patient at self cure It was Sydenham who said A disease in my opinion how prejudicial soever its cause may be to the body is no more than a vigorous effort of Nature to throw off the morbific matter and thus recover the patient This is true in the mental realm as well as in the realm of somatic disease except that it might be added that for all practical purposes the delusional system is more like scar tissue which has replaced the wound and if by any chance it could be removed the wound would be opened again and bleeding and it is just this eventuality that must be guarded against The patient has not taken a lifetime and expended his energies continuously on the problem of covering up and disguising certain instinctive tendencies except as a result of a need on his part which is as great as the effort which he has made and it is not to be expected that an uncovering of these tendencies will be taken kindly and calmly by the patient The affection which he may have for his physician to begin with may easily be turned to hate if this results and more than one physician has had to realize that he has meddled unwisely with a delusional system And so if such a system of delusions is approached it must be done with great care great delicacy skill and finesse and it must be realized that they can not just be torn loo e from their moorings and nothing put in their place, during the course of therapy it must be realized also that danger ous situations may develop and provisions should be made beforehand if the patient is not already institutionalized to institutionalize him upon the appearance of symptoms that are dangerous so that both the patient and others may be protected during such an interval of flare up Obviously treatment under these circumstances is only for the most highly efficient to undertake and even then it is essentially still in the stage of being a research problem primarily Nevertheless with all these impedimenta these difficulties and obstacles there are from time to time favorable reports of therapy in this field Even though these favorable reports represent only partial improvements they do indicate that the therapy of the psychoses even the most malignant is not standing still

The element of danger in all ca es of paranoid types of reaction should be as consistently borne in mind as is the possibility of suicide in a depression This of course does not mean that every paranoiac or every paranoid is necessarily dangerous but with the background of delusions of persecution it can be easily understood that resentment may express itself in an attack upon the supposed persecutor or persecutors Sometimes this attack takes the form of a murderous assault upon someone against whom the patient has definite reasons for believing that he is an enemy for example the judge who presided at

the patient s trial in past years and sentenced him to imprisonment the doctor who found that he was suffering from a psychosis and testified to his insanity the hospital director who keeps him locked up, supposedly at the behest of his persecutors, when he knows, in the opinion of the patient, that he is perfectly well or the social reformer who assassinates a ruler on the theory that that is the method of procedure in order to secure needed reforms in government All of these and many other reasons may make the paranoid patient a dangerous person Unfortunately the danger does not confine itself to such logical expressions If there are hallucinations present, it sometimes happens that the patient walking along the street will hear some vile epithet applied to him and will turn around and shoot the first man he sees supposing that he was responsible for its utterance Of course, such actions are pretty difficult to foresee

In the conception of paranoia by the French author Magnan he described three stages of reaction to the persecutory delusions first the patient runs away from them then he defends himself against them by such means, for example as insulating himself from electricity and finally he attacks his persecutors This was expressed by three French verbs as follows, *il fuit il se defend il attaque* This is an interesting formula to bear in mind if one does not take it too seriously and too rigidly Many patients like one of those quoted spend their lives in running away and perhaps defending themselves and never show the slightest inclination to attack anyone Others are dangerous from the start and remain so All intermediate stages between these two extremes may be observed Whether an individual suffering from paranoid ideas is or is not dangerous depends upon the amount of hate and aggressiveness which are mobilized by the delusional system and this in turn will be found, not infrequently at least as corresponding to the sort of individual who has become involved in a paranoid delusional system In other words, it is not the content of the delusions which is necessarily the important activating factor but it is the sort of person who is afflicted that is of the most significance

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CHAPTER VIII

DEMENTIA PRECOX (SCHIZOPHRENIA) GROUP

By CLARENCE O CHENEY

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Conceptions of Dementia Precox

There is good reason to believe that mental disorders and their manifestations have altered little through the past centuries with the exception perhaps of those of specific, particularly infectious, etiology notably general paresis, and that the symptomatology of what we now call dementia precox has existed for an indefinite period From the Greek and later writers on mental disorders one finds hints of the clinical pictures of modern dementia precox, but because of these writers classifications of various and multiform disorders under the designations of acute and chronic excitement, melancholia, primary and secondary dementia idiocy etc, one is not able to separate out those cases that might have been actually dementia precox reactions However it is of interest to note that under the heading of stupidity and morosity, Willis the English anatomist, in 1672 wrote as follows "Many young people in childhood intelligent to a degree, and extremely teachable, so that by their learning and conversation they swept every one with a state of admiration afterward as they grew older turned out stupid and dull and those who before were very beautiful in person afterward presented no grace or comeliness in their appearance '

Pinel in 1809 describes cases similar to those of Willis but under a heading of idiocy ' The descriptions include the picture of what we would call catatonic dementia precox, one case is cited as being "cured by an attack of mania" Esquirol in his Maladies Mentales ' used the term incidental or acquired idiocy for the same developmental defect acquired during adolescence He observed not only a failure to reach maturity in the face of a good start but actually a passing into what he called idiocy He considered it provoked by excessive bleeding during the acute psychosis, suppression of menses, onanism, blows on the head etc

In his Traite des Maladies", published in 1850, Morel used the term demence precoce in connection with a type of "stupidite , which was looked upon as constitutional and as of an hereditary, degenerative nature

In 1863 Kahlbaum attempted to classify clinical entities according to the etiology course and outcome, and in his group of paraphrenias or age bound disorders he placed the hebephrenias for the adolescent age period Shortly later his assistant, Hecker described hebephrenia as a disorder of deterioration related to puberty and adolescence One of

Kraepelin's assistants Daraszkiewicz broadened the conception of hebephrenia to include belated hebephrenias up to the age of 30 In 1891 Pick of Prague took up Morel's term of demence precoce to apply to those cases of hebephrenia originally described by Kahlbaum and Hecker

Meanwhile Kahlbaum in *1868* and *1874* had described katatonia also under the heading of vesania or general insanity Vesania was supposed to run through successive stages of melancholia mania confusion and dementia Katatonia was placed in the same sub group as general paralysis and designated as vesania progressiva General paralysis of course was not then recognized as a specific syphilitic disorder and the muscular tensions and rigidities of catatonia apparently were looked upon as having some analogy with the paralyses of general paralysis

Kraepelin in *1896* specified dementia precox as synonymous with hebephrenia and gave catatonia and dementia paranoides as independent types on an equal footing with dementia precox By 1898 however Kraepelin had formulated his conception of dementia precox as a disease entity including catatonia hebephrenia and the paranoid type At that time he grouped the dementia precox disorders under metabolism disorders along with myxedema and general paralysis In the eighth and last edition of his textbook on psychiatry 1913 Kraepelin placed dementia precox and paraphrenia the latter a group which he had split off from dementia precox under the heading of endogenous dementias They are described as showing two peculiarities In the first place, so far as could be seen they were not occasioned from without but arose from internal causes and secondly at least in the great majority of cases they led to more or less marked mental enfeeblement It was asserted that it appeared that this form of mental weakness in spite of great differences in detail exhibited many features in common with other forms of dementia such as were known as the result of paralysis senility or epilepsy Dementia precox was broken up into 11 clinical forms and the symptoms of each were described in detail under various headings but without giving the life history or the whole clinical picture of the cases so that one could not get a complete story and there was little if any attempt at interpretation of symptoms or any attempt to arrive at an understanding of what they meant to the patient Emphasis was placed on the bad prognosis and the tendency to dementia

Clinical pictures were looked upon as due to 'a morbid disease

process' Acute and chronic nerve cell and neuroglia changes, which had been reported by Alzheimer, Nissl and other investigators as present in brains of patients dying with dementia precox, were taken as evidence of this disease process Although it was stated by Kraepelin that "the causes of dementia praecox are at present still wrapped in impenetrable darkness he felt that the statement might be made with all reserve that a series of facts in dementia praecox up to a certain degree makes probable the existence of an autointoxication in consequence of a disorder of metabolism" He felt uncertain, however, about the source and kind of the toxins circulating in the body

Kraepelin rejected the idea that clinical symptoms of dementia precox might signify nothing else than the gradual failure of an inadequate constitution and stated but in any case the fact is decisive that the morbid anatomy has disclosed not simple inadequacy of the nervous constitution but destructive morbid processes, as the background of the clinical picture" He rejected also the conception brought forward by Jung that the symptomatology might be due to complexes or emotionally toned groups of ideas He could not accept the thought that complexes like "parasitic psychic neoplasms' could be withdrawn from the influence of consciousness or the ego and at the same time be able to transform or annihilate the person The clinical descriptions of Kraepelin were helpful to psychiatrists and still are in separating out certain clinical reactions from others with their different etiology and course But the conception of a disease process with brain pathology led to a fatalistic attitude on the part of physicians who were coming in contact with cases of dementia precox—a feeling that nothing could be done about it with a consequent unfortunate effect not only on the patients but on the physicians In more recent years this attitude of therapeutic nihilism has been to a certain extent, counteracted by the conceptions of other investigators but unfortunately still in some quarters at least, a diagnosis of dementia precox carries with it a feeling of hopelessness for therapeutic assistance to the patient

Bleuler first used the name, schizophrenia, in place of the term dementia precox He stated that in view of the fact that the "disease" need not progress as far as dementia and does not always appear "praecociter" that is during puberty or soon after he preferred the term schizophrenia He stated also that he called dementia precox schizophrenia because he hoped to show that the splitting of its different psychic functions constitutes one of its most important attributes' Bleuler included under the

term schizophrenia more than Kraepelin He said Under schizophrenia are included many atypical melancholias and manias of other schools (especially nearly all hysterical melancholias and manias) most hallucinatory confusions much that is elsewhere called amentia, a part of the forms consigned to delirium acutum motility psychoses of Wernicke primary and secondary dementias without special names most of the paranoias of the other schools especially all hysterically crazy nearly all incurable hypochondriacs some nervous people and compulsive and impulsive patients The diseases especially distinguished as juvenile and masturbatory forms all belong here also a large part of the puberty psychoses and the degeneration psychoses of Magnans Many prison psychoses and the Canser twilight states are acute syndromes based on a chronic schizophrenia

As Hoch pointed out in his review of Bleuler's observations with the exception of manic depressive insanity which to Bleuler was small in number of cases and the few cases of Kraepelin's paranoia and hysteria everything within the functional group of psychoses was schizophrenia Under these circumstances it is not to be wondered at that in schizophrenia only a comparatively small number of marked deteriorations occurred according to Bleuler He put the figure at [illegible] per cent while 18 per cent were said to present a moderate degree of deterioration and as many as 60 per cent a mild degree of deterioration Bleuler claimed however that there was no case in which some defect was not seen but this defect was sometimes very slight and might amount to not much more than a lack of adequate insight Bleuler considered that probably the largest number of cases belonging to the group of schizophrenia were latent cases and rarely came to psychiatric hospitals Among latent schizophrenics he included those who were looked upon as nervous people or psychopaths those irritable persons who could not get along well individuals with oddities or those who were reticent seclusive or presented an exaggerated scrupulousness and precision Bleuler described fundamental symptoms and accessory symptoms and also primary symptoms and secondary symptoms The description causes some difficulty in arriving at clearness of his conception However he meant by fundamental symptoms those which were always present to a certain extent in latent as well as in active schizophrenia and this included particularly a disorder of the association process or primary loosening of the connection of the association Another fundamental symptom was a more or less extensive loss of

experiments on the mechanics of development how each part of the organism has a certain dynamic and morphogenic possibility but that in many points the shaping to a final perfection depends on regulation of the balance of the simultaneously growing other organs and their functions Deficient growth or precocious growth of an organ disturbs these regulations, and the necessary result is a disharmony and every plus is apt to be held up by some minus in another direction This same principle is eminently valid in functional life, and especially valuable in the most complex of biological regulations—those of mentation Here a veritably practical and critical presentation of the early work of James has very justly pointed to habits as a unit of observation and biological interest And it will be our duty to define in actual cases what sets of habits we find interwoven and with what effect This directs the attention to the investigation of matters which are open to influence in education and to a more rational management of dementia praecox as well as many other mental disorders and habit disorder is to be treated by habit-training not by vague encouragement and excessive protection and mere fighting of incidental disorders To be sure all incidental disorders such as the phenomena usually lumped together as auto-intoxication, must be corrected as far as possible, and their correction gives us a vantage ground on which to begin and promote the more fundamental principle—that of habit-training And in cases where we see disorders developing, whether on ground of heredity or not it is this issue which guides us in the concrete plan of teaching and prevention And since the other elements which are apt to figure in our presentations of etiology, nosology and pathology are much more hazy it is much more satisfactory to come out frankly with a statement that we wish to make distinctions of various types of habit disorganization to study the working of the various sets of activities and habits in the patient, determine their relative values by accurate observation coming up to the mark of the experiment and shaping our therapeutic measures in accord with these principles This naturally does not exclude in any possible way the consideration of the factors of heredity, and the disorders of this or that organ, but on the contrary gives every manageable part its working chance'

He referred to the various types of neurotic constitution with brief indications of the characteristics of the psychasthenic the neurasthenic the hypochondriacal and the hysterical and then described what he called a deteriorating type of constitution as follows "In cases of de

mentia praecox we find over and over in account of frequently exemplary childhood but a gradual change in the period of emancipation Close investigation shows however often that the exemplary child was exemplary under a rather inadequate ideal an example of goodness and meekness rather than of strength and determination with a tendency to keep good in order to avoid frights and struggles Later religious interest may become very vivid but also largely in form a certain disconnection of thought unaccountable whims make their appearance and deficient control in matters of ethics and judgment at home irritability shows itself often wrapped up in moralizing about the easy going life of brothers and sisters, sensitiveness to allusions of pleasure health etc drive the patient into seclusion Headaches frailty appetite general malaise hypochondriacal complaints about the heart, etc unsteadiness of occupation and inefficiency day dreaming and utterly immature philosophizing and above all loss of directive energy and initiative without obvious cause such as well-founded preoccupations except the inefficient application to actuality All these traits may be transient but are usually not mere neurasthenia but the beginning of a deterioration more and more marked by indifference in the emotional life and ambitions and a peculiar fragmentary type of attention with all the transitions to the apathetic state of terminal dementia I am inclined to put the emphasis on a deficiency of critical and consecutive thought habits with a prevalence of interest in the phantastic mystic religious and unreal, owing to deficiency in working interests which would dovetail with the progressive active course of the world

He pointed out that in general the psychasthenic constitutional reaction was not of the type of dementia precox reaction nor were the hysterical neurasthenic manic depressive or in part the paranoic and that it had been denied by some that simply hysterical individuals were apt to develop characteristics of the dementia precox reaction but he pointed out the Janet claim that cases of hysteria did have to be transferred not infrequently to mental hospitals on account of deterioration and also that many cases of dementia precox begin with hysterical symptoms Meyer mentioned a case of a patient who had shown a hysterical onset after confinement and had been looked upon as a case of dementia precox but recovered completely in her it was shown that there were none of the manifest and plain antecedents that he had described for dementia precox

He emphasized in dementia precox reaction types a psychic defi

ciency to meet actuality and a tendency to unreality, to the mystic, common enough outside of dementia precox but here combined with a a deficiency of judgment and habit due to the undermining effects of other disorganizations of mental and organic habits 'The prevalence of defect in the habits of the reproductive zone is most striking '

Meyer called attention to the fact that generally in discussions of the etiology of dementia precox 'these points of disharmonious development are put down as the product of mere fatal constitutional defect, the result of some statistical fate, reminding one of the dogma of infant damnation, leading students to move toward generalities and fostering a disinclination in them to go into a study of the actual case' He pointed out the desirability of studying these factors of habits and tendencies as a sound activity and as things with which something could be done to help a patient in modifying his habits and the eventual outcome

Meyer's fundamental conceptions of dementia precox were further exemplified in the paper read before the British Medical Association in August 1906 His discussion included the following which we quote at some length because of its fundamental importance 'The full wholesome, and complete reaction in any emergency or problem of activity is the final adjustment, complete or incomplete, but at any rate clearly planned so as to give a feeling of satisfaction and completion At other times there results merely an act of perplexity or an evasive substitution Some of the reactions to emergencies or difficult situations are mere temporizing, attempts to tide over the difficulty based on the hope that new interests crowd out what would be fruitless worry or disappointment, complete or incomplete forgetting is the most usual remedy of the results of failures and just as inattention and distraction correct a tendency to over-work, so fault-finding with others or imaginative thoughts or praying or other expedients are relied upon to help over a disappointment, and, as a rule, successfully Other responses are much more apt to become harmful, dangerous, uncontrollable—a rattled fumbling or a tantrum or a hysterical fit, or a merely partial suppression an undercurrent, an uncorrected false lingering attitude, or whatever the *reaction* type of the individual may be What is first a remedy of difficult situations can become a miscarriage of the remedial work of life, just as fever, from being an agent of self-defense may become a danger and more destructive than its source In the cases that tend to go to deterioration certain types of reactions occur in such frequency

as to constitute almost pathognomonic empirical units I would mention hypochondriacal trends ideas of reference fault finding or suspicions or attempts to get over things with empty harping unaccountable dream like frequently nocturnal episodes often with fear and hallucinations and leading to strange conduct such as the running out into the street in nightdress etc or ideas of strange possessions with hallucinatory dissociations or the occurrence of fantastic notions All these appear either on the ground of a neurasthenoid development, or at times suddenly on more or less insufficient provocation with insufficient excuse but often enough with evidence that the patient was habitually dreamy, *dependent in his adjustment to the situations of the world rather* on shirking than on active aggressive management scattered and distracted either in all the spheres of habits or at least in some of the essential domains of adjustment which must depend more or less on instinct or habit On this ground reaction types which also occur in milder forms of inadequacy in psychasthenia and hysteria or in religious ecstasy etc turn up on more inadequate foundation and with destructive rather than helpful results We thus obtain the negativism no longer as healthy indifference and more or less self sparing dodging but distinctly as an uncontrollable unreasoning blocking factor We obtain stereotypes not merely as substitutive reactions and automatisms on sufficient cause such as everybody will have but as it were as a reaction of dead principle in a rut of least resistance We see paranoic developments with the same inadequacy of starting point and failure in systematization and in holding together the shattered personality etc

Meyer in a discussion of the relationship of hysteria to psychasthenia and dementia precox reported cases of a progression from a hysterical reaction existing over a period of years to an eventual dilapidation of application and interest and another case which had shown a psychasthenic type of reaction but which eventually deteriorated He indicated that therefore plain hysteria does not protect against dementia precox and also that simple deterioration may carry with it the picture of psychasthenia for some time and he therefore emphasized that although for general and particularly for teaching purposes it was desirable to keep entities of hysteria psychasthenia and dementia precox clearly apart as far as that agreed with the facts the conception of reaction types rather than disease entities offered an opportunity for constructive work and analysis

Hoch, referring to Meyer's statement that dementia precox is a disorder which may not develop in any one but that only some personalities are in danger and that in the development inadequate psychobiological habits played an important part, called attention to the fact that in obtaining accurate histories of patients from which one might form an opinion of the personality as it existed before the psychosis a certain type of personality, which he called the "shut-in" personality, recurred with striking frequency He said "We find in dementia præcox persons who do not have a natural tendency to be open and to get into contact with the environment, who are reticent, seclusive who cannot adapt themselves to situations who are hard to influence, often sensitive and stubborn, but the latter more in a passive than in an active way They show little interest in what goes on, often do not participate in the pleasures, cares and pursuits of those about them, although often sensitive, they do not let others know what their conflicts are, they do not unburden their minds, are shy and have a tendency to live in a world of fancies This is the shut-in personality " He reported that from the study of his case material he had found a typical shut in personality in 49 per cent of the cases and indication of it in a further 19 per cent An additional 24 per cent of the cases were described as showing peculiarities of other types It appeared that the persons showing the typical shut in personality make up the larger number of those patients who deteriorated On the other hand in the cases which did not show definite deterioration but who either got well or, while presenting chronic symptoms did not lose interest in their environment to any marked degree and whose train of thought did not get confused he found either indications of the shut in personality or still more frequently other abnormalities of make-up such as long-standing neurasthenoid states, shallowness of emotion lack of consideration for the environment or abnormal insistence on precision, a tendency to day dreaming evidence of a poorly balanced sexual instinct etc

Hoch pointed out that the shut in personality after all shows only the direction in which the dangerous traits lie, and that it was fair to assume that other abnormalities which could not as yet be clearly defined, might work in the same direction Kirby had pointed out that a certain shallowness of interest without a general shutting in was not rarely seen in those cases who did not show the typical shut in makeup Histories as obtained seemed to show that only about 8 per cent of dementia precox patients might be described as apparently of normal

mal cup Hoch called attention to the fact however that behind a correct appearance the results of a formal training there might be much that is not apparent in ordinary life but which at any time might under stress come to the surface Hoch recalled that Freud had shown that in the neuroses we were dealing primarily with a lack of adaptation to reality in the sexual sphere with an inadequate or faulty development of the instinct in its wider meaning in the sense that owing to a certain fixation and limitation of the interest in that sphere in childhood and owing to subsequent repression the later free application and adaptation was interfered with and that Jung had insisted that a similar sort of abnormality in the sphere of sexual instinct exists in dementia precox Hoch stated that he was inclined to regard this view as a probably correct one for the following reasons In the first place the close relationship which existed between dementia precox and puberty Secondly the obvious frequency with which sexual conflicts are found to have played an important role in the development of the disorders in the patients whose lives are investigated Thirdly that analysis of the content of the psychosis showed again and again the existence of sexual trends sexuality manifesting itself in a peculiarly diffuse poorly adapted manner such as the falling in love with several persons at the same time He felt therefore that there was much that spoke in favor of the claim of a fundamental lack of sexual adaptability

Hoch felt that even without knowing the origin or the fundamental meaning of the constitution which he had described we could see nevertheless reasons why such a constitution should represent a serious menace to the mental balance of the personality The inability to get into contact with the environment bears in itself many dangers it prevents an active aggressive shaping of the situation which is so important for the progress of the normal individual and which forestalls further conflicts it prevents the corrective influences which actual experience constantly furnishes and which is gained in the mingling with people the mutual actions and reactions it fosters the growth of unproductive fancies Everyone has a certain inclination to day dreaming but aside from the fact that it plays a rather subsidiary role in the normal robust person the fancies often represent in them the first dim outlines of future plans and therefore are not without reference to reality and receive their value from that side but fancies which are out of contact with reality probably exert in themselves a certain fascination which progressively limits objective interest Moreover these very tendencies

make the individual unfit to acquire those constructive plans and hopes not necessarily elaborated, but felt, dimly appreciated, upon which the normal person lives, and which gives to him the very essence of his existence. There is an absence of that progressive, prospective satisfaction which cannot be too much insisted upon is necessary for the retention of mental health. The active contact with the world makes of course, more demands upon the individual than a life in pure fancies towards which the path of least resistance evidently leads in these patients. We see, therefore, that the traits upon which we would lay most stress in the shut-in personality, the lack of contact with the environment, the satisfaction with fancies instead of objective interests, the lack of constructive aims and aggressiveness, must have dangers in them which it would be difficult to exclude as dynamic factors in the development of these disorders, and we must agree with Adolf Meyer when he has again and again insisted upon the importance of faulty psychobiological habits in connection with dementia praecox."

Hoch asked, "What is after all, the deterioration in dementia praecox if not the expression of the constitution tendencies in their extreme form: a shutting-out of the outside world, a deterioration of interests in the environment, a living in a world apart?"

Abraham discussing the dementia praecox reaction from the psychoanalytic standpoint pointed out that the histories of cases of dementia praecox showed that frequently they had never had a proper capacity for transferring their libido to the external world, that there was a cessation of object-love and of sublimation, a condition similar to that found in early childhood which was termed by Freud autoerotism. "In this period, too, interest in objects and sublimation is lacking. The psychosexual characteristic of dementia praecox is the return of the patient to autoerotism and the symptoms of his illness are a form of autoerotic sexual activity." Abraham stated that this did not mean that every sexual impulse in these patients was purely autoerotic "but it does mean that every attraction to another person is, as it were, sicklied o'er with the pale cast of autoerotism." Shame is a sublimation from a childhood stage of autoerotism. Dementia praecox patients, with their violent expressions of love for persons with whom they come in contact show no shame, which Abraham considered a step in the direction of autoerotism. On the other hand, frequent shiftings of love feelings from one person to another showed the incapability of any steady attachment to one person. Imaginary love affairs are child-like. Abraham also

pointed out that the patient whose libido has turned away from objects has set himself against the world He is alone and faces a world which is hostile to him It seems as though his ideas of persecution were directed especially against that person upon whom he had at one time transferred his libido in a marked degree In many cases therefore the persecutor would be his original sexual object It is further maintained that the autoerotism of dementia praecox is the source not only of delusions of persecution but of megalomania Under normal conditions when two persons have transferred their libido on to one another each over estimates the value of the other whom he loves The mental patient transfers on to himself alone as his only sexual object the whole of the libido which the healthy person turns upon all living and inanimate objects in his environment and accordingly his sexual over estimation is directed towards himself alone and assumes enormous dimensions For he is his whole world The origin of megalomania in dementia praecox is thus a reflected or autoerotic sexual over estimation Every delusion of persecution in dementia praecox is accompanied by megalomania

In consequence of his autoerotic blocking the patient does not receive any new impressions and reacts to the external world either in an abnormal manner or not at all Dementia praecox is an autoerotic phenomenon in which the patient is without normal affective reactions to the external world Abraham felt that the psychosexual constitution of dementia praecox was congenital that the history showed patients were always peculiar and dreamy and never associated with anyone and that long before the actual outbreak of the illness they were unable to transfer their libido and therefore carried out all their love adventures in the realm of fantasy They never completely overcame their infantile autoerotism Object love did not fully develop in them and when the disease becomes manifest they turn to autoerotism once more

The psychosexual constitution of dementia praecox is based therefore on inhibition in development A person who has never completely passed out of the primary stage of psychosexual development is thrown back more and more into the autoerotic stage as the disease progresses A great part of the pathological manifestations of dementia praecox would it seems to me be explicable if we assumed that the patient has an abnormal psychosexual constitution in the direction of autoerotism Such an assumption would render the recently discussed toxin theory unnecessary

Dr Roy G Hoskins in his book The Biology of Schizophrenia has

published material that was largely presented by him in the Salmon Memorial Lectures in 1945. Dr Hoskins has for approximately 18 years been director of research at the Worcester (Mass.) State Hospital and of neuroendocrine research at the Harvard Medical School. He presented in the first section of his book a comprehensive discussion of the biology of man in relation to schizophrenia and in concluding this section says:

"To recapitulate: man is depicted as the culminating phenomenon in a long process of integrative evolution. The panorama of existence embraces at one extreme the subatomic particles, the electrons, the neutrons and the protons, and at the other the highest levels yet reached of social organization. The aggregated subatomic constituents are organized in a series of increasingly complex forms that include atoms, molecules, molecular crystals, proteins and other structural materials, protoplasm, cells, tissues, organs, organ systems, individual beings and social groups. Emerging at the various levels are the properties of form and structure, metabolism, reproduction, life, heredity, awareness (consciousness), affect, drives and instincts, behavior patterns and empathy. These attributes in ensemble give rise to individual personalities and to social aggregates. As matter evolves into increasingly higher forms, new levels of organization are imposed upon the constituent substrate units, and there emerge new properties in each system thus derived. What were wholes at one level become parts at the next level. It is the peculiar new relationships of such parts that give rise to the new properties of structure and behavior. It is of especial moment to our thesis that the new emergence, at whatever level, reveals qualities that are unique and must be studied by methods appropriate to that level, though knowledge of the lower levels is necessary for the adequate understanding of the higher. This is the essence of the concept of *holism* as expounded in psychiatry by such writers as Meyer and Angyal.

"We are all so familiar with the phenomenon as a matter of personal experience that we readily overlook the astounding tour de force that nature accomplished in evolving a unified personality out of so many discrete elements. The body is a seething laboratory in which hundreds of chemical processes are going on simultaneously. It is thus a vast complex of activities at the molecular level. Each of the three thousand billion cells that make up the body carries on its own existence, assimilating its own food and oxygen, excreting its own wastes and carrying out,

in addition its specialized functions Thus at the cellular level also many kinds of activities are taking place Similarly the different organs have a variety of separate functions and the organs in turn are associated in co operating systems The various sorts of controlling mechanisms chemotactic neural hormonal instinctual and voluntary come in further to complicate the picture Yet out of this composite diversity is derived that unified totality the individual personality

The schizophrenic psychosis represents a failure or distortion somewhere in the course of the integrative series Its explicit cause remains unknown The malintegration could conceivably exist at any level from the atomic to the social Whether the psychosis is singularly or multiply caused and the nature and level of operation of the etiological factor or factors remain for research to determine Until such knowledge comes to hand attempts at prevention of the disorder will be mere trial and error and treatment will be empirical shooting in the dark

In his discussion of the current status of the schizophrenia problem Hoskins says

> Despite these various difficulties in actually defining and characterizing the psychosis the most enlightened psychiatric thought is gradually coming to an acceptance of the assumption that the psychosis is a genuine entity that consists of true process or constitutional schizophrenia and should be set aside from the various schizophreniform reactions that are frequently grouped with the true psychosis Many believe with Lewis that these latter confusing disorders differ fundamentally in their essential nature pathogenesis and prognosis In the discourse to follow we shall commonly use the term schizophrenia in the sense of process schizophrenia
>
> From the general biological point of view however it seems to me that the possibility must still be faced that schizophrenia may be an entity by fiat only as are disorders in general that are delimited merely on a basis of symptoms For all that we know explicitly to the contrary the psychosis may be strictly comparable to such diagnostic entities as headache or hypertension each of which has a common core manifestation but each of which may represent very dissimilar disorders The first and most fundamental question of all then explicitly what is schizophrenia must continue disconcertingly to face us throughout the remainder of this discussion

To the question of what is the fundamental nature of the psychosis

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methods and results are presented in some detail which it is not feasible to describe here and for which the interested reader is referred to the original publication

In the final biological appraisal of schizophrenia Hoskins says The foregoing are the over all aspects of the disorder that impress this physiologist as most meaningful when viewed in a biological frame of reference For what the concept is worth then I would propose that the schizophrenic psychosis represents an end result of a generalized failure of adaptation that arises from defective evolution of the maturing processes The failure is manifested in an intricate variety of ways but especially in defective homeostasis somatic and psychic defective empathy and final over all disintegration of the personality The accessory symptomatology of the psychosis can be regarded as constituting secondary adaptations to the difficulties arising out of the primary concept

An obvious alternative to the immaturity concept of schizophrenia is that the psychosis may be due to a specific pathology a pathology that leads to the decompensation that was discussed in section The possibility has been mentioned that such a specific pathology might exist in abnormalities of one of more enzyme systems in the brain It is of course quite possible that the postulated immaturity might have its fundamental origin in such a specific pathology I shall eschew any amateur attempt at neurologizing in relation to this possibility but will merely quote from a letter received from the late Stephen Walter Ranson shortly before his death expressing a belief that the best place to seek a solution of the schizophrenic problem is in the hypothalamus I shall cite in support only a single item from the relevant physiological literature namely the work from Ranson's Institute previously mentioned that of Brookhart and his collaborators who showed that by so simple a means as hypothalamic puncture it was possible to eliminate sexual behavior hence reproductive capacity from guinea pigs of both sexes What is especially pertinent is that the reproductive apparatus endocrine and otherwise remained so far as microscopic study could determine entirely normal It is quite possible that many of the disturbances of homeostasis that were discussed in section 3 might similarly be results merely of defects in the hypothalamic region And parenthetically if one chooses to regard the psychosis as in the last analysis merely a functional disorder due to malconditioning in the broad sense it is quite possible that it is via the hypothalamus that the disorder is chiefly mediated

and what does it mean as a special manifestation in the order of living things. Hoskins says "a satisfying answer cannot yet be given." In a discussion of the research carried out by himself and his associates he describes the various findings with respect to the individual glands and results of treatment and concludes:

In summary, then, it appears that various of the functional disturbances seen among schizophrenic patients are quite similar in kind to those resulting from various sorts of glandular deficiencies. Furthermore, the various endocrine glands have been frequently reported to show structural alterations suggestive of functional inadequacy. Of the various endocrine preparations that have been used in the treatment of the disorder thyroid and the androgens appear to have given the best results. In a larger proportion of the cases than would have been expected by random chance or as a result of increased personal attention the patients have improved coincident with such medication. In our experience at least, however, no single gland preparation nor combination of gland preparations has sufficed to bring about complete restitution of the patients, the one exception having been a eunuchoid who seemed to be really cured by androgen.

While such data definitely throw the burden of proof upon proponents of endocrine therapy, they by no means close the issue. It is quite possible that were appropriate and potent preparations selected and were these given for sufficiently prolonged periods materially better and conceivably even completely adequate results might be secured.

Another possibility remains open, namely, that the numerous evidences of functional glandular inadequacy that are seen in schizophrenia may be due not to deficits of the individual hormones but to inadequate responsivity to them. The high tolerance often manifested by schizophrenics to thyroid points in that direction. We have noted also that schizophrenics generally respond in less than normal degree to injections of adrenalin and insulin. Whether the same is true of other hormones should be determined. In the event that depressed reactivity to hormones should prove to be a consistent characteristic of the psychosis then therapeutic attempts should be addressed primarily to normalizing responsivity. How or whether this could be done remains a matter for empirical determination."

Oxygen metabolism, carbohydrate metabolism, circulatory conditions, temperature regulation and equilibrium reactions and homeostasis in schizophrenia were studied by Dr. Hoskins and his group. The

methods and results are presented in some detail which it is not feasible to describe here and for which the interested reader is referred to the original publication

In the final biological appraisal of schizophrenia Hoskins says The foregoing are the over all aspects of the disorder that impress this physiologist as most meaningful when viewed in a biological frame of reference For what the concept is worth then I would propose that the schizophrenic psychosis represents an end result of a generalized failure of adaptation that arises from defective evolution of the maturing processes The failure is manifested in an intricate variety of ways but especially in defective homeostasis somatic and psychic defective empathy and final over all disintegration of the personality The accessory symptomatology of the psychosis can be regarded as constituting secondary adaptations to the difficulties arising out of the primary concept

An obvious alternative to the immaturity concept of schizophrenia is that the psychosis may be due to a specific pathology a pathology that leads to the decompensation that was discussed in section The possibility has been mentioned that such a specific pathology might exist in abnormalities of one or more enzyme systems in the brain It is of course quite possible that the postulated immaturity might have its fundamental origin in such a specific pathology I shall eschew any amateur attempt at neurologizing in relation to this possibility but will merely quote from a letter received from the late Stephen Walter Ranson shortly before his death expressing a belief that the best place to seek a solution of the schizophrenic problem is in the hypothalamus I shall cite in support only a single item from the relevant physiological literature namely the work from Ranson's Institute previously mentioned that of Brookhart and his collaborators who showed that by so simple a means as hypothalamic puncture it was possible to eliminate sexual behavior hence reproductive capacity from guinea pigs of both sexes What is especially pertinent is that the reproductive apparatus endocrine and otherwise remained so far as microscopic study could determine entirely normal It is quite possible that many of the disturbances of homeostasis that were discussed in section 3 might similarly be results merely of defects in the hypothalamic region And parenthetically if one chooses to regard the psychosis as in the last analysis merely a functional disorder due to malconditioning in the broad sense it is quite possible that it is via the hypothalamus that the disorder is chiefly mediated

Hoskins then points out that 'perhaps in the current stage of our baffling ignorance neither the foregoing nor any other formulation can be really gratifying but it does offer, I think, some potentially profitable suggestions for investigative strategy." He indicates that, if the psychosis represents primarily failure of maturity then the fundamental problem becomes one of the biology of the maturing processes and that research in this problem should be carried out in biological laboratories. Further investigation should be made of the influence of vitamins on metabolic processes and upon the endocrine mechanisms and one the various enzyme systems of the body. Further research may solve the schizophrenic problem so that we may be guided to success in both prevention and treatment. "In the meanwhile, however, an exigent need remains for palliative methods."

Some persons, particularly those who are unhappy or feel frustrated unless they are given definite final answers to problems, will probably be dissatisfied or frustrated with Dr. Hoskins' conclusions and will raise the question as to whether fifteen or more years' research in dementia precox might not have brought forth something more final and definite. Many persons who talk about research, especially those who have had very little experience with it, seem to expect that research, particularly laboratory research, should solve most, if not all, of the problems in psychiatry and particularly those of dementia precox. To the present writer Dr. Hoskins' work and formulations are a distinct contribution to the understanding of dementia precox. When one considers the multitudinous chances for failure of the developmental process at the many different levels, one can understand the possible reasons for the very many variations in physical and psychological development and in clinical reactions that we see in dementia precox. The present writer is not inclined to look upon dementia precox as a 'process", if by that is meant a single, specific, progressive development or lack of it. Each case of dementia precox is one of nature's experiments that has gone wrong. If one sees an oak tree of retarded or distorted growth with poor leafing or early development of disease or premature death, one hardly expects to ascribe one specific cause to these results. It would seem much more difficult to find one specific cause for the poor development or distorted growth of a case of dementia precox. The present writer cannot agree with those who hope and expect that some tangible specific cause will be found for the variety of nature's failures that we call dementia precox.

Our present conception of dementia precox follows essentially the formulations of Meyer and Hoch rather than the formulations of those who looked upon dementia precox as a disease entity with a toxic or metabolic basis An attempt may be made to define dementia precox therefore as a group of psychopathological reactions which may be acute and episodic, but more frequently are chronic and progressive arising in persons who commonly have shown greater or less degrees of personality inadequacies Such inadequacies are in the large proportion of the cases demonstrated by tendencies to withdrawal from the realities of everyday life inclinations to live in day dreaming or phantasy shallowness of thought and judgment Histories show that persons who develop dementia precox reactions frequently retain immature ideas and feelings toward sexual life or have shown an inability to meet the demands of adult sexual adjustment The symptoms of the more obvious disorder may be shown in a progressive withdrawal from contact with persons and activities in the environment this attitude becoming so marked that it becomes of interest to those who have to deal with the person arousing their feeling that there is something wrong Or on the personality groundwork new adaptive demands or circumstances which to the normal person would be ordinary may precipitate symptoms which attract and demand attention these manifesting themselves at times in excitement again in stupor or phantastic delusional ideas with hallucinations and with odd behaviour which resembles often that of a child or primitive person The reactions are spoken of therefore as regressions a slipping back to an earlier child like or infantile type of feeling and acting

Symptomatology

For practical purposes of description and classification but also with implications of course and prognosis the dementia precox group is subdivided into sub groups of (1) simple type ( ) hebephrenic type (3) catatonic type (4) paranoid type The symptomatology of the various groups will be discussed with the understanding however that they are not in themselves mutually exclusive reaction units but rather that from patient to patient and in the same patient they may pass over one into another A dementia precox patient may at one time show the reaction which is predominantly that of the hebephrenic type may change to show more of the symptoms of the catatonic form and later

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Occasionally they have some appreciation that a change has developed in them but usually they are not sufficiently interested to develop good insight or realization that there is anything wrong with them or that they are different from other persons Given tasks to do they carry them out in a routine manner without evidence of interest and they may keep up these same routine activities for years having thus reached a level of adjustment that is suitable for them but being dependent upon others for planning for their support and maintenance We recall one such patient who as a youth had been docile and apparently intelligent but who at beginning maturity showed a characteristic loss of interest When he was urged to do something for himself he became irritable and threatened his father with an axe He has been hospitalized for approximately 15 years and follows daily a regular routine acting as a kind of house man in the superintendent s house He is as regular as clockwork in reporting for his daily duties goes about them methodically and never makes a change in his routine Almost daily he makes requests of the housewife for a piece of candy but never expresses other desires His routine includes leaving the house at a certain time after lunch spending the afternoon walking around the grounds in a certain location sitting by himself on a certain seat and returning at a regular time to the ward He knows everybody with whom he comes in contact at the hospital and recalls without difficulty the events of his life both before and since he has been in the hospital He is never spontaneous in his talk however and answers in a low monotone When his people visit him he shows interest only in what they bring him to eat He is always gentle in his attitude and in his contact with others never expresses any delusional ideas or does he hallucinate We always believed however that if an attempt were made to break him of his routine or interfere with what he wished to do he might not only become petulant but very irritable and non cooperative Obviously he would be unable to hold any remunerative position because of his inability to adapt himself to the wishes of other people and because of his lack of interest in making adjustments His family are unable to support him outside the hospital

Such persons may become vagrants wandering around from place to place with no goal in sight or being taken up by the police and sent to jail on a charge of vagrancy We recall that a number of years ago when we were selecting patients to be transferred to a newly opened hospital we visited one of the hospitals for the criminal insane We found there some 16 men who had been sent previously to a penitentiary

may demonstrate essentially the symptoms of the paranoid reaction Or, on the other hand, a patient, who originally may show predominantly symptoms of the paranoid reaction, may deteriorate in his activity and thinking so as to show more of the symptomatology described under the hebephrenic type Most of the patients, however, may be said to present throughout their course predominantly the symptoms of one sub-group

Simple Type

In this type of reaction the characteristic history is that of an exemplary child with good progress in school and with promise of a bright future but, beginning at or about puberty, fails in school because of lack of interest, becoming more and more withdrawn and slowly or quickly deteriorating into an apathetic, dependent state of existence One finds that such children often have been considered exemplary and model children because in being unaggressive and submissive and in really having little active interest in persons or in what was going on around them they gave little trouble in their bringing up Such young people are found to have had a strong dependence on one or the other parent and not infrequently have been kept dependent on their parents Whether or not this dependence originates from a fundamental incapacity for independence in the child, or whether it is forced on the child by the parents as an outlet for the latters' emotional needs, is difficult if not impossible, to say in the individual instance

Such types of individuals may, after failing in school, attempt various occupations in a desultory way, if they have not already become totally apathetic, but success and progress in occupation are not achieved Sometimes fortunately a manual occupation, particularly farm work more or less accidentally may be gotten into by these persons, who have lost their main interest drives, and they may carry along indefinitely in a rut without attracting particular attention or causing difficulty Other persons with more marked personality defects and with more apathy become quite inactive declining to make any effort to occupy themselves If efforts are made to urge them or to stir them up, there may be reactions of irritability and at times assaultiveness

If such persons are admitted to mental hospitals, they show a general lack of active interest they are generally passive and submissive following out the routine of the hospital as laid down for them without active interest in their present situation or in changing it for the future

effort in seeing that he got a telegram that was alleged to have been sent to him regarding a prospective position

With us he is mild submissive dependent and when the situation is discussed he sits on the edge of the chair in a rather expectant manner reminding one of a ten year old boy He shows no spontaneous interest in social contact and is not disturbed or bothered in the least by his present situation he has no plans for the future he thinks that perhaps mental hygiene might do something for him but one can obtain no elaboration of such an idea from him He simply indicates that he has read something about mental hygiene He holds resentment against no one blames no one for his inadequacy or his lack of success he apparently is not sufficiently interested to develop antagonism or strong feelings toward anybody about anything He is being tried as a helper in the laboratory but it is evident that he cannot be depended upon to take any responsibility his professional career apparently is at an end and he will be able to adjust only to a simple routine level

Hebephrenic Type

The hebephrenic type of reaction shows itself characteristically at or comparatively soon after puberty although some cases may show more manifest symptoms at later age periods Many of these patients have shown outstanding personality characteristics of the seclusive shut in type Others are superficial shallow never seem to reach maturity in their emotional reactions and even if the manifest symptoms do not develop until later age periods the general personality reaction is outstandingly one of childishness and inconsistency with evidence of poor judgment and lack of logical thinking The outstanding symptoms may appear gradually with increasing withdrawal as in the simple deteriorations but with added symptoms of ideas of reference that is of being watched with misinterpretations of the actions of others hallucinations of phantastic nature such as being made pregnant by somebody at a distance or of being worked upon by external forces such as electricity and the radio *Passivity* or a feeling of being under the control of others and not having control of one's own thoughts, is a striking and frequent symptom of this type of reaction The emotional reaction frequently is a shallow one with giggling and laughing This may seem inconsistent to the observer The inconsistency between the thoughts and the emotional reaction in this type of disorder has been

charged with vagrancy, were recognized as cases of dementia precox and according to the law had been committed to the hospital for criminal insane These men were undoubted cases of simple deterioration of dementia precox type They were not feeble minded We received them in the civil state hospital where they were placed at tasks which they were capable of doing, and on this level of adjustment they continued without other psychotic manifestations

Hospital statistics show a simple type of deterioration as making up only a small proportion of the total number of cases of dementia precox admitted It is impossible to say, however, how many such cases are outside in the community being cared for by their families or living in a simple state of social activity

At times with more assets in the personality, inadequate persons may reach a fairly high level of adjustment and then give up the struggle and deteriorate to a comparatively simple disinterested state Such an example is seen in the following case whom we had in the hospital at the time of writing 1936

The patient is a licensed physician, 32 years of age He was a quiet, studious boy never interested in athletics or sports nor in the opposite sex He had a combined arts and medical course and apparently by devoting his whole time to study he was able to get passing marks although he says now that he was not interested in a number of subjects He managed however to get his medical degree and get through a general hospital interneship This was followed by a year as assistant physician in a home for the aged where he had few demands made on him He gradually lost interest in this however gave up entirely and remained idle at home for two and a half years making no effort to occupy himself in his professional work but reading books on economics and business At times there were arguments with his family particularly about religion

At the end of two and a half years he was gotten a position as an assistant to a physician in office work He had little responsibility and wished to take little He says that he did only the simplest things He was not interested in the practice of medicine Eventually he was discharged from this position and again remained idle at home for 16 months talking vaguely about trying to get positions but making no effort and having no practical plans for a livelihood He was brought to the hospital because of an outburst of rage with physical violence against his mother because of what he claimed was her lack of reasonable

school where she met another girl who was said to influence her to become intimate with boys She paid no attention to her parents' attempts to persuade her to keep away from this girl and boys

At 16 she became pregnant and had an abortion Sex adventures continued however with spurts of remorse counterbalanced by irritability toward her parents when they remonstrated with her she asserted that she would do whatever she could to most provoke her mother because of a feeling that she was being watched over too closely She was graduated from high school and had one year of college could not find the work she wished and finally accepted a position as a bookkeeper with a relative After doing this work for one year she became nervous and irritable and told her parents that she thought she was losing her memory and that she was developing a venereal disease and continued in this belief despite reassurance by a physician She then decided to abstain from relations with men became more irritable and depressed and it was found that she had adopted masturbation as a sex activity and thought it was making her ill She had expected to marry a college student but told him that she had a venereal disease and estranged him from her in this manner One surmises that this was one way of meeting the threat of marriage and adult sexual adaptation Her sleep and appetite became disturbed She was irritable and critical of members of her family She then developed the idea that people were talking about her and following her and she refused to leave the house

Then she was admitted to the hospital With us over a period of several months at times she has refused to eat and had to be tube fed she might be mute or have outbursts of excitement in which she sang talked in a loud stilted manner assuming odd postures flinging her arms upward walking about with her eyes closed and staggering about the corridors Sometimes she wept loudly She called women nurses by masculine names and asked them to undress so that she could tell their sex She paid little attention when she was asked to give an account of her life was only fleetingly interested in her environment She frequently expressed love feelings for the various physicians She said she felt faint whenever she saw a man During a disturbed period she said I have lice all over me in my nipples and inside of me She then took off all her clothes and demonstrated little pigment spots which she said were lice I also need two abortions Tell H H I worked hard enough sleeping with one thousand men for eight years Is there any cure for the lice? They planted them in my hair I lost my sight in my left eye because they put

emphasized frequently by many writers, but it appears that this psychological inconsistency or incongruity may be more apparent than real and due to the observer's interpretation from his own viewpoint Grotesque and fanciful ideas that we might expect to bring out depressive reactions may not seem depressive to the patients Consequently, they react in a hilarious manner, which is quite consistent with their own interpretation of their ideas For example, if a patient laughs or giggles at the expression or the idea that her mother or father is dead such a reaction seems inconsistent to us but the death of the parent may represent the satisfaction of a wish fulfillment of the patient and thus be gratifying and associated with a pleasant emotional reaction

These patients may, at times become excited over active in response to their ideas, not infrequently turn against members of the family and require a special disposition for their treatment Some run a continuous course over a long period of years with constant hallucinations of a phantastic nature with reaction to them so that they can only be cared for in mental hospitals Others because of their transitory and fleeting hallucinations and emotional outbursts, show more of an episodic course Their reactions may simmer down after a short period in the hospital so that they are left as persons with mild interest, shallow emotions and poor judgment, but they may be able to get along outside with their families and not cause too much difficulty We recall a physician's wife who was always superficial, shallow in her thinking and who for years has caused difficulty among her friends because of her misinterpretations of their actions She had had illogical feelings that people did not like her that they slighted her and had built up a loosely knit superficial system of false ideas about things that went on around her She has been a problem to her family and her friends but she has been tolerated and probably will continue to be able to get along outside of a hospital as long as this tolerance and understanding persist

A 21 year old girl is admitted to the hospital with what is described as a fearful, confused reaction with thoughts that people talk about her and follow her on the street She also says that dogs and cats are after her She pulls down shades to keep people from haunting her The history shows that she was a healthy youngster, was considered affectionate toward her parents and her brothers and sisters but was shy with other children She had a particular interest in dramatics and was given dramatic lessons from the age of 8 She was always timid of dogs and cats She was graduated from public school at 14 and entered high

patient in speaking of her father said When I was eighteen he married me He gave me a little ring and said Give it to little Henry (her brother) This did not mean that I would marry him Henry but Joseph' (her father) Again she said Joseph really married me when I was twelve but did not tell me until he gave me the ring at eighteen

Another patient of the hebephrenic type of dementia precox during a stormy period that is when she was disturbed by her conflicts showed this conflict in her talk She said They told me my father wants me to be his mistress My mother and brother object to this that would be terrible The next minute however she said that her father wanted relations with her and also that her brother treated her for love— the same kind of pleasure that man and wife have together She showed her uncertainty also by occasional statements that she thought her talk might be insane talk She said If I heard anyone else talk this way I would say they were nutty If I had a revolver I would blow my brains out I would be better off than tortured by the ones that are torturing me This apparently represented a feeling of guilt about her thoughts and her desire to be relieved of them The fact that she had this conflict and did not accept entirely the incestuous thoughts and infantile thinking showed that she had a certain preservation of her more socialized conscious personality It was not surprising therefore that she recovered from this stormy period or panic but simmered down into an inactive and dependent state in which she was able to get along outside the hospital Like most patients of this type however she was unable to think things through could not understand and could not be gotten to understand why she should have had such thoughts and was not inclined to accept them as her own

Catatonic Type

In those persons who develop the catatonic form of dementia precox frequently the marked degree of shut in personality may not be present but the history frequently shows that they tend to be sullen unsociable and more of the rigid unbending type of personality with little warmth or satisfaction in contact with others A marked degree of stubbornness in childhood and adolescent life with also irritability are outstanding characteristics To these may be added suspiciousness reticence and over conscientiousness

The onset of the more striking mental symptoms frequently is sub

a light near my eye when I was working at the K M shops I masturbated for eight years because they gave me a man donor during a blood transfusion (She had had a transfusion after her abortion) M F gave me a baby in the ward, that's why I hate the ward I was saved by a man donor, that's why I was a masturbator Tell that to B K My bowels look like a dog I never slept with a dog'

She showed no improvement over a period of four months The prognosis was considered poor for an eventual satisfactory adjustment The history showed her difficulty in making a satisfactory sexual adjustment We see frequently in this type of person a playing or toying with sex including promiscuous relationships without, however, the ability to develop any real deep feeling of affection for a person of the opposite sex, and when an attempt is made for an adult sexual adjustment in engagement or marriage a break occurs and disorganization of the whole personality results This type of reaction is looked upon as a pernicious or malignant one

With these patients the thought is omnipotent, thinking a thing is so makes it so to them The wish is dominant A patient wishes that she were married to the doctor or a prince or any other person that has an appealing form, and as far as the patient is concerned the act is accomplished without reference to reality or the orderly procedure of things The thought may be so distorted that it is not understandable or conceivable to a normal person unless one looks back into the thinking activities of children with their lack of logic and entire disregard of reality The patient may consider himself a man or a woman or both In her thought she may have been married to her father and given birth to herself or brothers and sisters

For example one patient who had been a well-educated nurse said I am a Eunice in other words non sexed I rank as a non sexual—since my youth, before that I was a sort of combination, male and female My male part was a sort of Knight of Columbus a crowned cobra I was sealed and clamped, a sealed and enclosed garden That was done when I was a child In the feminine I was a vestal virgin and in the male a Knight My mother was really my father somewhat like myself, being doubly involved I have grown sons, I have no idea how many That s something you will have to consult the clans about I never gave birth to them I include them in my heart and soul and spirit'

Incestuous ideas which are ordinarily repressed and sublimated come to the surface in full expression in these patients For example, one

patient in speaking of her father said When I was eighteen he married me He gave me a little ring and said Give it to little Henry (her brother) This did not mean that I would marry him Henry but Joseph' (her father) Again she said Joseph really married me when I was twelve but did not tell me until he gave me the ring at eighteen

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signs mentioned above may go into an acute excitement or panic in which apparently they are trying to get away from their conflicts become quite tense anxious fear stricken and at times attempt suicide Auditory hallucinations of an unpleasant nature frequently are present and the patients react to these voices frequently in an assaultive manner destroying property acting as if they were trying to solve their conflicts by tearing physical things apart or trying to get out of an impasse Such panics not infrequently are shown in reaction to homosexual or incestuous conflicts sometimes disguised by symbols such as fear of bodily attacks by persons of the same sex or by persons representing symbolically the parents or members of the family In protest against these ideas the patients seem to be fighting at times for their very existence but project their own thoughts on others accusing others of being persecutors or torturers These attacks of excitement may last for many months or longer or may terminate after a week or two with a sudden or gradual subsidence of the activity These patients may become quieter rather quickly and act as though they had passed through a bad dream They likewise are not inclined to discuss or work out their problems The conflicts usually are repressed and because of this lack of assimilation and understanding of their conflicts such attacks are apt to recur Or patients may gradually quiet down from their excitement become less disturbed by what were previously distressing thoughts and come more to accept them as real and not troublesome Such patients may settle down into a chronic hallucinatory state with little reaction to the hallucinations They may never however regain their former personality reactions but remain indifferent and inactive sometimes with sudden bursts of excitement when their phantasies are interfered with or again apparently with spurts of a more normal protest against what they consider torture by disagreeable ideas

A young man of 6 had been sulky as a child and as he grew older was stubborn He was slow in making friends and social contacts but was considered by his family to be rather friendly He was bright did well in school until he had an appendectomy at 17 after which he refused to return to school He worked as a salesman moderately successfully However after his operation at 17 he had various somatic complaints and went a good deal to doctors When he was 2, he suddenly developed catatonic symptoms He refused to come out of a telephone booth and when taken home stood and gazed about vacantly his head against the window pane was irritable and rebellious against

acute or gradual with an increasing withdrawal from contact with others. The patient may become depressed and uneasy apparently because of the conflicts and also because of the latter may become anxious, irritable and perverse. There may be complaints of difficulty in thinking, headache, other pains and fatigue. Such patients may continue their withdrawal until they get to the point of going to bed and may gradually sink into what is called a catatonic stupor which may be looked upon as the height of withdrawal from contact with the outside world. Patients in catatonic stupor may lie in bed, be immobile, sometimes with the eyes open and again with the eyes shut. There may be no obvious response to external stimuli except in their control as shown by the pulling away when attempts are made to move parts of the body. These actions are referred to as negativism. Such patients accumulate saliva to the full capacity of their mouths, if they are allowed to do so, urinate and defecate in bed, make no effort to feed themselves and either have to be spoon fed or tube-fed, if they resist spoon-feeding. Some patients show a waxy flexibility of their extremities, in general referred to as *cerea flexibilitas*, in which their limbs may be molded into various positions in which they are held for an indefinite period. Mutism is a characteristic symptom in this condition.

Although these patients appear not to be cognizant of their surroundings, it is found upon recovery from stupor that the patients are able to recount most, if not all, of the happenings that have gone on around them, having been quite clear during the stuporous period. These patients may come out of a stupor suddenly and appear fairly well but frequently are unable or unwilling to discuss the cause of their symptoms or their feelings at the time. However, other patients give accounts of thoughts of having died or of fear of death or of punishment. Thoughts of death also are found associated with incestuous phantasies which these patients go through in their stupor. The stupor may last for a short period of weeks or for longer periods, sometimes of years, with remissions even in the latter cases. Or, the patients may gradually come out of the stupor and continue to assume stiff, rigid attitudes and frequently peculiar repetition of movement, also repetition of words or phrases. These repetitions are referred to commonly as *stereotopys*. These all have some meaning to the patient, but usually it is impossible to elicit their meaning because of the patient's uncommunicativeness.

Instead of passing into a stupor some patients, after the premonitory

been bashful as a child aloof moderately stubborn, was tactless and resentful of authority His range of interest was narrow chiefly intellectual and he was strongly attached to his mother and sisters He lacked a sense of humor was moral and intolerant of risque stories he never had any love affairs or apparent interest in the opposite sex He was graduated from college his main interests being philosophy and sociology He did poorly in chemistry and physics and required an extra year for graduation He wanted to write books on sociology and the drama but needed money and so entered the dress manufacturing business with his brother in law At the age of 7 he became suspicious of his brother in law thought he was against him then thought something had happened to him He stood speechless for short periods thought people were against him saw signs in numbers stayed by himself thought his food was poisoned and talked about the struggle between capital and labor

He was admitted to a private sanitarium 8 months after the onset where he insisted on reading for hours in the orchard during cold weather He showed rigid attitudinizing in many postures He escaped from the first sanitarium drew his money out of the bank and went to Washington to protest to the Government to have experiments stopped that were being made on him by labor He was committed to another private sanitarium where he talked in a stilted staccato manner He was disinterested and at times disturbed and assaultive One could never get in contact with him to discuss his ideas or feelings He was removed from the private sanitarium after a year A Viennese psychiatrist attempted to stimulate what he thought was a normal interest by having an attractive young woman with the patient In the country he grew a beard and refused to have his hair cut He acted in a very primitive manner went around nude inserted articles into his rectum masturbated on feces and showed no reaction in the state of nudity before women He was again taken to a private sanitarium after about eight months of this type of primitive regressive behavior At the new sanitarium he said he was Jesus Christ and acted as if he were a martyr

Shortly afterward he was transferred to the state hospital where he refused to talk assumed odd poses was very resistive refused to walk and had to be carried bodily along the wards stayed in one position for an indefinite period lay on the bed with his head erect in an immobile manner He walked into the examining room with his body stiff and rigid and had to be almost carried in by employees. Occasionally he

interference, refused to eat, became untidy and careless in his person and in his habits He was in a private sanitarium for a short time improved returned to work for 3 weeks During this latter period he was struck on the head by an opening door but apparently was not injured Subsequently, however, he became self-absorbed, restless, disturbed and required hospitalization, where he broke furniture, threw himself out of bed and made several attempts at suicide

During the next three years he spent his time in various hospitals usually in a resistive, mute condition, sitting with his hands tightly clenched accumulating saliva in his mouth He had to be dressed and undressed at times, made no defense movement against pin pricks, his facial expression was vacant, with no signs of emotion At times his eyes were open but often they were closed At times there were fragmentary utterances such as 'stop it' or "hurts', when his mouth was being cleansed Again he would say "I'd like to know if I can't be transferred to some ward where I can stay in bed and be waited on" It was necessary at times to tube-feed him However, when three full years after the onset of his symptoms he was allowed to visit home, he suddenly ran away from there, pawned his watch registered under an assumed name in a downtown hotel avoided policemen and was located only after a few days This latter episode is mentioned to indicate that the patient was clear and able under sufficient stimulus to look after himself in an active manner

Upon his return to the hospital he showed the same rigid tense state as previously with only fragmentary requests to go home, his fingers clenched in his palms and making no effort to help himself He was transferred six months later to a state hospital and about six months after that appeared one day at one of the former hospitals, apparently in a remission He had suddenly cleared He described this as a cloud lifting from his head He was free and easy in all his movements and talked volubly but blamed his whole difficulty on the blow on the head He later started a suit for damages He is an example of the type of remission that may be seen after several years duration of catatonic symptoms but without presence of good insight or a willingness to review the whole situation in a frank way and try to understand himself One could never find out what his conflicts might have been He refused to recognize that he had any difficulty or symptoms of any kind before receiving the blow on the head

Another patient who came under observation for the third time had

The onset of frank mental symptoms may be gradual with increasing suspiciousness aloofness from others and development of persecutory feelings or in some special instance such as a disparaging remark by a fellow employee or loss of a position because of inefficiency the persecutory reaction becomes full blown the patients express ideas that various persons are plotting against them trying to poison them and particularly trying to interfere with their sexual life Sometimes paranoid reactions develop acutely as they do in the catatonic form with a panic which often seems to be of a homosexual nature Auditory hallucinations predominate threats of bodily harm are heard Trivial ordinary incidents are misinterpreted as referring to the patient People look at him in the street in a peculiar manner they seem to know about him Policemen or other public authorities frequently are misidentified as persecutors The patient hears himself called derogatory names sleep is interfered with his sexual organs may be interfered with at night Women frequently think they are violated Single women who have had no real love affairs develop the idea that their employers wish to marry them and misinterpret glances as indication of this or married women who are ill adjusted to their husbands think that other women are trying to get their husbands away from them and misinterpret a glance from any woman at their husbands as indicative of a liaison Past events in the patients lives which they have tried to suppress become known to various persons These persons talk about it and spread gossip from one to another so that the whole community may be turned against the patient in his imagination

If these paranoid personalities have been in general better integrated than those who develop the hebephrenic type of reaction the ideational content and the emotional reaction seem often more consistent than in the hebephrenic type The patients protest vigorously against tormentors and persecutors and show at times a violent emotional reaction The delusional trend however is not as systematic and elaborated as in the paranoia of Kraepelin In the dementia praecox type of personality the delusional ideas become at times quite bizarre and illogical Depending upon the previous integration of the personality these patients maintain for many years an aggressive protest against persecution with preservation of their social instincts so that they maintain themselves outside their delusional ideas in a more rational manner than the hebephrenic dementia praecox patients If they have tended more to the superficial illogical type of personality they tend to lose their aggressive emotional reactions and

would shuffle his feet in a peculiar manner, hold his hands down tightly at his side, had a blank, dull expression, made grimaces, refused to respond to questions, and frequently would shout in a loud voice, "Go to hell, get away from here." He was placed in an oxygen chamber containing fifty per cent oxygen for two months and then was given carbon dioxide treatment daily for a period of several weeks. During the latter period he would talk in a disconnected manner in order to avoid treatment. For example, asked whether he had enough milk, he said, "to connect on the outside world. On the outside world I occasionally went to the stores. I once went to the grocery on the corner and I bought a bottle of - - - billings" (It was found that he referred to magnesia.) "I would like to take a trip to the North. Oh, maybe it will be possible. I would like to look at the schools there, ... supervise ... the country schools, the universities, the colleges." When asked why his brother did not visit him he said, "He must have gone to see the queen and she must be busy entertaining him. She used to love him much more than me. She wanted to chop my legs off. He's a fool." When asked what queen he was talking about, he said, "Maybe it goes further than that."

Following the treatment, however, he reverted to his previous catatonic, rigid, mute, resistive state and has remained so for the last three years without signs of improvement. He requires constant care and attention in the hospital, has to be fed or urged to eat and apparently is in a chronic, regressed state from which recovery is not to be expected.

Paranoid Type

This type of reaction is apt to develop later in life than the types previously described in persons who are frequently of better than average intelligence, frequently successful at school, college or business. However, they are apt to be sensitive and dislike criticism, and although they may appear to be independent and self confident, these characteristics appear often to be assumed and compensatory for underlying feelings of lack of security. Aggressiveness also may show itself as a compensation for a lack of confidence. Persons who develop this paranoid reaction are apt to be stubborn. They have not lent themselves easily to advice or correction, they question the motives of others, cooperate poorly and insist on having their own way. They tend to keep things to themselves, they are restrained, appear serious and are not open, friendly or at ease with others.

sent him letters which he said had double meaning and which were insulting in character He became confused abstracted and then told about an alleged homosexual affair he had with a priest The truth of this was not established He became more uneasy and distressed and was admitted to the hospital

He was concerned about his alleged homosexual practices and his conversation about other matters would be interrupted by protests about his sexual indiscretions He insisted that people followed him outside and thought that the church was against him because of his alleged sexual activities At times he appeared perplexed and anxious about problems and his life was all mixed up At other times he would appear relaxed and at ease His comfortable periods with realization of his mental difficulties increased for a short time but then again after a month in the hospital he became more preoccupied did not wish to go out of the hospital people seemed to watch him and talk about him on the street or they thought he had a queer walk He heard the voices of men accusing him of having an illegitimate child by a prostitute Voices accused him of ruining the married life of a particular couple The voices said that he had done this so he could marry the woman The patient denied at first interest in her and then admitted that he and the woman had had a good deal of interests in common that he had been tempted by her physically several times and that he had kissed her He protested constantly that he had no idea of marrying the woman or wanting to separate man and wife but the voices apparently projected his own thoughts

He wrote letters to his mother and to girls interspersing natural rational statements showing interest in outside things with frequent statements regarding his own bestiality self abuse and other sexual activities for which he blamed himself He became more incoherent in his thought and was removed to a private hospital where he has shown more disintegration

Juvenile Forms

Although they may be comparatively infrequent we feel there is no question but that dementia precox reactions occur in children before puberty Brill has reported two cases of children four and a half and six years old respectively who showed dementia precox reactions in the catatonic form Streeker reviewed five thousand consecutive hospital admissions and found four cases of dementia precox whose ages ranged

accept the illogical ideas without protest and tend to deteriorate in their general conduct much like the hebephrenic type

Other patients, however, develop a compensatory, expansive or megalomanic type of reaction, the number and distribution of their persecutors increasing to include the wide world at times This obviously is an egotistical reaction, as such an amount of attention from so many people gives a certain amount of satisfaction to the patient's ego He becomes more and more important and therefore develops a feeling of superiority and may overcome his persecutors by developing the idea that he is more powerful than they, in fact, all powerful and that he can control persons or things by a glance or a look or even by a thought, his thoughts are transmitted throughout the world Not infrequently such paranoid dementia precox patients identify themselves with important personages such as governors presidents or members of the royal family They do not get to the point of a logical elaboration of such ideas they merely have these ideas and accept them as true In this respect they differ from the true paranoic, who works out a logical plausible elaboration of his ideas The types of paranoid reaction, therefore, vary from those closely allied to the hebephrenic through different grades of integrated thinking up to the true paranoic

A patient, whom we admitted some time ago, at the age of 28, was the son of an irritable emotionally unstable father and a high strung mother whose brother had been confined to a mental institution for forty years as a case of dementia precox The patient had nine brothers and sisters who were looked upon as well adjusted He did not like school and was resentful of his brother's superior knowledge and education but had shown good business judgment He had not been graduated from high school until the age of 21 and then worked with his father as a florist He was not sociable, was bashful with strangers preferred to be left alone insisted upon having his own way and was easily offended He had four or five sporadic affairs with married women or widows but always avoided the question of marriage About two years before the patient's admission the father died, and the responsibility of the business devolved upon the patient He became tense nervous, accused his family of not cooperating with him left them and lived in the greenhouse and said that everybody was against him, that he was misunderstood When plants in the greenhouse died he accused a certain nun of dropping poison on the plants or said that the men working for him were killing them Later he thought that people in his place of work were talking about him people

of the thwarting of his wishes and a lack of affection for his mother who had to care for him as she had not done previous to the development of symptoms

Another boy was admitted to the Psychiatric Institute at the age of 11 years He had had a normal birth and normal infancy, walking and talking at the usual ages He was a quiet baby but not spontaneously happy At the age of 3½ he suddenly stopped talking held himself rigid for periods of several minutes made faces and showed wide spread choreiform muscular twitchings with incontinence of urine and feces These symptoms persisted until the age of 5 when they disappeared gradually so that at the age of 6½ he entered the first grade in school and had up to the time of his admission made satisfactory progress never having been kept back and obtaining somewhat better than the average in his grades He was a shy child he never seemed interested in making contacts with other children but on the other hand read intensively delving into archeology and astrology At the age of 10½ years he made an uneventful recovery from an appendectomy and showed no unusual reaction to his illness Three months before admission or at about the age of 10 years and 9 months he was found one night sitting up in bed grimacing and saying his classmates were outside talking about him He insisted that the window shades be kept down He was sent to camp where he kept by himself He complained that the boys hated him and talked about him On two occasions he attacked two of the boys and used bad language to a counsellor in an episode of excitement On being sent home he refused to return to school saying the boys talked about him and were jealous of his ability to play the piano and do sculpturing

Under observation he was at times quiet kept by himself showed a mild interest in reading in animal stories and in drawing When he could be gotten to talk it was found that his fund of information was very good for a boy of his age His I Q was 105 He grimaced whined cried and bit his handkerchief and had outbursts of excitement when he would strike kick and bite the nurses and the other children if he could reach them A few months after admission his disturbed periods became more and more marked so that he could not be cared for with other children In his outbursts he said I am Mussolini I am von Hindenburg You have broken my thirteen commandments Again he said I am a million years old today I am different from the other boys as I want to know about the Stone Age I am a doctor of the High

between 11 and 14 years Kasanin and Kaufman, after reviewing the case records of six thousand patients at the Boston Psychopathic Hospital, found six patients between the ages of 13 and 15 belonging to the schizophrenic group Potter reviewed a series of six cases of dementia precox in children observed at the Psychiatric Institute Their ages were 4 6, 10 11 and 12 years respectively One boy, aged four on admission had walked and talked at the usual ages and as an infant and child had been considered active, happy, alert, good natured, but he had been quite dependent upon his parents his mother grandmother and a nursemaid He seemed indifferent to other children and had been afraid of dogs and cats At the age of 3½ he became overactive in a purposeless way was destructive, unmindful of those about him paying no attention to their questions or commands spent most of his time in bed whispering to himself or playing with his fingers At times he would masturbate openly He began to talk in a meaningless manner His answers to questions were irrelevant At times he would bite scratch and hit his mother in what appeared to be a rage Under our observation usually he was mute He would stand in one place as long as he was left alone and hold his arms or body in the position in which they were placed He was not rigid and would walk along with one, holding one's hand, but when his hand was dropped he would stand immobile until he was led somewhere else He showed no particular interest in what was going on around him His behavior seemed to be more or less automatic At times he would have an outburst of crying or active resistance accompanied by rage One could not find out what was going on in his mind After a number of months occasionally he would utter a few words but their meaning could not be elicited One never felt in contact with him There was practically no change after two years in the hospital, and as his family were unable to care for him, he was admitted to a school for mental defectives as the only place available to care for him, from the last report there has been no sign of improvement in him

In this case there was no evidence of acute infection or other physical disorder nor were there any neurological signs or symptoms to suggest encephalitis of the epidemic or other infectious type It was found however that the boy had been very much attached to a nursemaid and to his grandmother The symptoms had developed after the nursemaid had left the household, and the boy was no longer able to visit his grandmother because of reduced financial circumstances It is considered that the boy s reaction may have been one of regression because

for mental disorders The number of cases of dementia precox first admissions was 11 per hundred thousand general population there were 11 8 male dementia precox cases per hundred thousand population and 10 1 females

Table I compiled from Malzberg s statistics shows the number of cases of dementia precox admitted for the first time to all institutions for mental diseases New York state in 19 9 19,1 This table speaks for itself but it may be emphasized that the percentage of male dementia precox admissions exceeds that of the female that the largest number of patients admitted and classified as dementia precox are in the age period of twenty five to thirty four and that this age period also shows the highest ratio to the general population

In the civil state hospitals of New York State for the year ended June 30 1934 there was a total of 35 380 patients classified as cases of dementia precox these constituting 56 4 per cent of the total hospital population 47 7 per cent of these were males and , per cent females On March 31 1944 the number of dementia precox cases in the same hospitals had increased to 4 403 or 58 8 per cent of the total hospitals population Cases of dementia precox also constitute a much larger per cent than any other diagnostic group of mentally ill patients

TABLE I

First Admissions of Patients with Dementia Precox to all Institutions for Mental Disease in the State of New York During the Fiscal Years 19 9-31 According to Age Periods

Age Periods	Total First Admissions			Per Cent of All Admissions			Rate per 100 000 Population		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Under 15 years	16	12	28	14 8	16 9	15 6	0 3	0 3	0 3
15 to 24 years	1250	583	1833	5 5	38 2	49 5	38 ,	1 3	27 8
25 to 34 years	1450	10 1	48	48 8	4 1	, 8	44 4	31 1	37 8
35 to 44 years	940	9 7	19	2 ,	36 8	31 6	30 6	33 9	32 2
45 to 54 years	382	542	0 4	14 1	26 2	19 3	1, 4	0 0	21 6
55 to 64 years	94	184	278	4	12 1	7 9	0	3 4	10 2
65 to 74 years	16	35	51	1 0	2 6	1 7	2 3	4 6	3 5
75 years and over	4	5	9	0 4	0 5	0 5	1 7	1 7	1 7
Unknown	5	7	12						
Total	4103	33 6	539	26	6 6	26 3			
Per Cent.	52 2	44 8	100						

Clinic The patients should be given enemas as they do not move their bowels daily" After a period of a year and a half in the hospital his behavior became more disorganized He was assaultive and destructive He chewed his food, spit it out, smelt it and put it in his mouth again When asked why he smelt his food, he said "someone on the ward got a haircut and wouldn't let me smell it" He became more antagonistic toward his father and mother refused to eat what his mother brought him did not talk to or else told her he did not like her, wanted to call the police and have his father and mother arrested Once he said he wanted to stay in the hospital all his life and that he had come here to die After two years he remains in a disorganized state

From our observation of these juvenile cases of dementia precox it appears that some children at as early an age as four years may show marked symptoms of withdrawal from reality or contact with their environment such as is seen in others at an adolescent or later age period and also with similar disorganized behavior and disintegration of thinking Delusional ideas if present may be simple and on a child like basis but in many respects they differ little from the regressive, infantile thinking of adults who deteriorate to a low level of general activity

Incidence

Statistics to give an accurate estimate of the real prevalence of dementia precox are not available Psychiatrists see in the outside world many persons who have what they would classify as dementia precox reactions but who are not hospitalized Private practitioners treat an unknown number of cases of dementia precox An unknown number particularly of the simple type of dementia precox reaction manage to get along with a simple type of adjustment without being hospitalized Mental hospital statistics however show that dementia precox is the most frequent type of mental disorder leading to hospital admission Federal census statistics show that of mental patients admitted for the first time to 167 state and 2 federal hospitals in 1931-1932 7474 males and 6222 females or a total of 13,696 were classified as cases of dementia precox this number being 20 5 per cent of all admissions and exceeding in numbers any other type of mental disorder In addition 4784 patients who had had previous mental hospital residence and were readmitted during 193 , were classified as cases of dementia precox this number also exceeding that of any other class of patients readmitted

nt' or "difficult" and sometimes psychotic, and the question arises as to what role if any heredity plays in this group of reactions. If one finds dementia precox in several generations of the same family or in siblings a recurrence does not necessarily imply inheritance, the same factors in environment may have been operative to bring about similar reactions in different persons of the same or different generations or the habits of thinking and acting in one generation may have been imitated by the succeeding one with a similar result. However numerous workers have sought with much energy to solve the problem of heredity in mental disorders and specifically of dementia precox.

In 1938 Dr Franz Kallman published his volume the *Genetics of Schizophrenia* which represented in part at least the results of his study of genetics for a period of eight years in Germany. The material covered consisted of the families of 1 087 schizophrenics. Since 1937 Dr Kallman as an Associate at the New York State Psychiatric Institute and Hospital has made further studies and contributions to the genetics of schizophrenia including the families of approximately 700 schizophrenic twins. His studies include many statistical and other technicalities that might be imponderable to many physicians. Dr Kallman was requested therefore to summarize for this article his findings and conceptions regarding heredity in dementia precox. We are grateful to him for the following statement.

The Genetic Theory of Schizophrenia

The problem of the operation of heredity in the etiology of schizophrenia has been investigated intensively in recent years. It centers around the observation that the tendency to develop some form of a schizophrenic psychosis seems to run in families. This statement does not mean that a person is born a schizophrenic because it is known now that no physical or mental characteristic is inherited as such. What is passed on by the parents consists of certain genetic patterns or potentialities which are embedded in the morphological elements of inheritance factors the genes. If a gene is recessive as is apparently true in regard to that for schizophrenia a potential or predisposed schizophrenic must inherit the same gene from both parents who themselves may be only carriers without showing any noticeable evidence of schizophrenia. Such a homozygous' individual has the genetic capacity for reacting to precipitating environmental stimuli with a schizophrenic

on the books of these hospitals but living in the community either under "family care" (47.5 per cent) or in "convalescent status", formerly called parole (41.6 per cent of total).

The high proportion in resident population of cases of dementia precox is due to the comparatively early age on admission and the comparatively long life in the hospital before death or discharge; there is thus an accumulation of dementia precox patients compared with those suffering from other mental disorders. The average duration of hospital life of dementia precox patients dying in New York State hospitals in 1934 was 16.9 years. By 1944 this had increased to 19.1 years. The average age at death increased from 53.4 years in 1934 to 56 years in 1944. The number per hundred thousand general population of cases of dementia precox admitted to the New York State hospitals increased from 12.2 in 1919 to 22.5 in 1934. This of course does not necessarily mean that actual incidence of dementia precox among the population increased to that extent; the increase in rate of admissions may be due to other factors such as a wider knowledge on the part of the public of the advantages of hospital care and economic conditions which prevent home care, particularly in cities. From 1934 to 1944 this rate varied only between 22.5 and 25.

Figures compiled by Pollock show that the percentage of admissions of dementia precox cases from urban environments very definitely exceeds that from rural environment. This does not necessarily mean that there is as great an actual difference in incidence, inasmuch as it is well known that cases of dementia precox may be able to adjust themselves in comparatively simple rural environment without hospitalization whereas in urban settlements such cases would attract attention toward hospitalization or, on the other hand, might not be tolerated by their families in the cities as they would in the country. It is surmised also that the stresses and strains of city life might act as precipitating factors in the development of marked symptoms which might not be brought out in a rural life.

Pollock's figures based upon hospital admissions of cases of dementia precox show also that dementia precox is more prevalent among the foreign born than among the native born in both the city and the country.

Heredity

Anyone, who deals with cases of dementia precox comes soon to realize that not a few of the members of their families are "odd", "pecul

average expectancy and among the twin partners of schizophrenic index cases who happen to be identical or monozygotic twins (85 8 per cent) Kallmann is believed to have demonstrated therefore that the chance of developing schizophrenia increases in direct proportion to the degrees of blood relationship to a schizophrenic index case a conclusive proof of the operation of heredity He has established also the fact that whenever twin partners or other blood relatives of schizophrenic patients are found to be psychotic a schizophrenic type of psychosis will be the rule indicating a specific type of inheritance

Additional evidence concerning the significance of a specific genetic predisposition to schizophrenia has been provided recently by Kallmann s analysis of 691 schizophrenic twin index families studied with the best available procedure in human genetics the twin family method According to this survey all the observed variations in the schizophrenia rate are correlated with different degrees of consanguinity to a schizophrenic index case but not with similarity or dissimilarity in the respective environments of one egg and two egg twin partners of schizophrenics and their other brothers and sisters The collective morbidity rates for these three categories of siblings amount to 85 8 per cent 14 7 per cent and 14 3 per cent respectively However about one quarter of one egg twin pairs show concordance as to schizophrenia without similar environment while close to one half of two egg twin pairs remain discordant even if the two partners have been exposed to the same environment In Kallmann s opinion this finding excludes the possibility of explaining the difference in morbidity between two-egg and one egg co-twins (approximating the ratio of 1 6) on non genetic grounds that is by a simple correlation between closeness of blood relationship and increasing similarity in environment His conclusion is that the specific predisposition to schizophrenia depends on a single recessive factor although other investigators suggested that the taint distribution in schizophrenic index families may be explained also either by two factor recessiveness (Rudin) or by a dominant factor (Koller)

According to Kallmann s theory the modifications in the expressivity of the single recessive predispositional factor for schizophrenia are controlled by a constitutional defense mechanism which probably is non specific and certainly multi factorial in its genetic origin He believes that constitutional resistance to a schizophrenic predisposition shows a wide range of graded variations and is correlated somehow with the morphological development of mesodermal elements This as

type of psychosis, while others have not. Whether or not a true psychosis will be developed by this individual depends on a complex biological process which cannot yet be described in its many ramifications. There is definite reason to believe, however, that the expressivity of the main schizophrenia gene may be reduced or completely inhibited in carriers distinguished by a strong constitution, and that the clinical expressions of the gene may range from the mildest or borderline cases to the most destructive forms of the disease.

The genetic theory of schizophrenia is based on the fact that the tendency to this kind of psychosis is found more often in some families than in others, while there is no known constellation of non genetic, environmental, factors which would produce the disease in a majority of persons exposed to them. Schizophrenia occurs much more frequently in families which include a known case of schizophrenia, index case, than it does in the general population, that is, in any group of persons who are not distinguished by their relationship to such an index case. On the other hand, not all the blood-relatives of a schizophrenic develop a psychosis, even if they live in precisely the same environmental circumstances as their schizophrenic relative. This observation can, according to Kallmann, be explained only by the assumption that they are protected from a schizophrenia producing environment by the absence of a specific genetic predisposition, without which a person under stress is incapable of reacting with a schizophrenic psychosis.

The statistical evidence in favor of this genetic theory as developed by Kallmann and other investigators is rather conclusive. There is agreement on the assumption that the average expectancy of schizophrenia in the general population does not exceed 1 per cent. It has been shown to be 0.85 per cent, to be exact. In a study of 1,087 schizophrenic index cases and 1 777 relatives Kallmann found that the children of schizophrenics have a probability of developing the disease which is nineteen time that of the general population (16.4 per cent). The grandchildren (4.3 per cent) and the nephews and nieces (3.9 per cent) are about five times more likely to show a recurrence of schizophrenia than is the average person. The expectancy for brothers and sisters of schizophrenics is somewhere between 11.5 and 14.3 per cent, that for half siblings is about 7 per cent and that for step-siblings 1.8 per cent. The schizophrenia rate of the parents of unselected index cases approximates 10 per cent, while the highest morbidity rates occur among the children of two schizophrenic parents, who have about 80 times the

the organism for adjustment it would of course not be surprising if the makeup of the soma and the somatic reactions might also be found to be be inadequate, and that we were dealing therefore with combined psychosomatic reactions which were evidence of an inadequate total organism From the time of Hippocrates there has been recognized a certain relationship between temperament and body build To Kretschmer is due particular credit for attempts at closer correlation between not only temperament but psychiatric disorders and body build He found what he described as the asthenic type of body build in 46 per cent of cases of dementia precox whereas in only 4 7 per cent of cases of manic depressive psychosis was this type of body habitus demonstrated In addition 19 4 per cent of the cases of dementia precox showed the dysplastic type of body build which Kretschmer ascribed to disorders of the glands of internal secretion that is physical types that were due to glandular dysfunction In no cases of manic depressive reactions did he find this type of body build It is to be noted however that Kretschmer found 17 7 per cent of cases of dementia precox to have the athletic type of body build whereas only 3 5 per cent of the manic depressive patients showed this habitus It may be mentioned also that Kretschmer found that 84 6 per cent of manic depressive patients showed what was called the pyknic type of physical habitus that is the round short type where only 2 8 cases of schizophrenia showed this physical makeup Kretschmer concluded that 'physique and psychosis do not stand in a direct clinical relation to one another The physique is not a symptom of the psychosis but physique and psychosis bodily function and internal diseases healthy personality and heredity are each separately part symptoms of the constitutional basis which lies at the bottom of the whole'

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sumption has been supported by the finding that the difference between two egg and one egg partners of schizophrenic index cases increases to a ratio of 1 55, when the comparison is extended to the similarities in both the clinical course and final outcome of their psychoses Kallmann has concluded, therefore, that the ability to resist the development or to counteract the progression of a schizophrenic psychosis is related genetically to the constitutional capacity for mobilizing effective, mesodermal, defense mechanisms The clinical implication of this statement is that a schizophrenic psychosis can be prevented as well as cured, and that no psychosis is developed under usual human life conditions unless a specific predisposition has been inherited by a person from both parents

One might conclude that there is no distinct law or rule of inheritance in the occurrence of dementia precox

From the practical standpoint particularly with reference to advice regarding marriage it would appear that one cannot say that the children of two parents who have dementia precox, will, necessarily have the same disorder although the chances of their having such a disorder are much greater than if both parents are well adjusted, normal individuals The occurrence of instability and neuroticism in the ancestry of two individuals, who are contemplating marriage, would lead one to the belief that chances would be greater that the children of these individuals would be neurotic and unstable and would possibly develop dementia precox, not necessarily entirely because of the inheritance factor but because of the influence of such parents on the training of their children These children might start with a handicap which they might not be able to overcome On the other hand one could never guarantee that the marriage of two persons, who might appear to come of good family stock free from mental disorder, would not result in children, who would later in life develop dementia precox reactions because of the hidden recessive traits in the parents or collaterals In the present state of our knowledge of inheritance factors in dementia precox it is not felt that one can estimate accurately and reliably the chances of the appearance of dementia precox in any family

Somatic Factors

If the psychological manifestations or reactions which we have described already, are inadequate reactions to the demands made upon

the organism for adjustment it would of course not be surprising if the makeup of the soma and the somatic reactions might also be found to be be inadequate and that we were dealing therefore with combined psychosomatic reactions which were evidence of an inadequate total organism From the time of Hippocrates there has been recognized a certain relationship between temperament and body build To Kretschmer is due particular credit for attempts at closer correlation between not only temperament but psychiatric disorders and body build He found what he described as the asthenic type of body build in 46 per cent of cases of dementia precox whereas in only 4 7 per cent of cases of manic depressive psychosis was this type of body habitus demonstrated In addition 19 4 per cent of the cases of dementia precox showed the dysplastic type of body build which Kretschmer ascribed to disorders of the glands of internal secretion that is physical types that were due to glandular dysfunction In no cases of manic depressive reactions did he find this type of body build It is to be noted however that Kretschmer found 17 7 per cent of cases of dementia precox to have the athletic type of body build whereas only 3 5 per cent of the manic depressive patients showed this habitus It may be mentioned also that Kretschmer found that 84 6 per cent of manic depressive patients showed what was called the pyknic type of physical habitus that is the round short type where only 8 cases of schizophrenia showed this physical makeup Kretschmer concluded that physique and psychosis do not stand in a direct clinical relation to one another The physique is not a symptom of the psychosis but physique and psychosis bodily function and internal diseases healthy personality and heredity are each separately part symptoms of the constitutional basis which lies at the bottom of the whole'

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lous involvement of the intestines, in 6 cases the liver, spleen, or both were tuberculous In this tuberculous group of patients the evidence of bad heredity poor physical development and the rather common finding of visceral, particularly cardiovascular, hypoplasia suggests that these individuals may have been poorly endowed to resist physical disease as well as to handle mental difficulties On the other hand this series shows patients, who generally were more robust, lived to an older age and finally succumbed to acute infections with or without cardiovascular degenerative changes or to malignant growths

Lewis in a study of the constitutional factors in dementia precox reported finding at autopsy small aplastic hearts in 71 55 per cent of the hebephrenic and catatonic types of dementia precox, the incomplete development including also the capillary system Only 7 8 per cent of the paranoid dementia precox cases had hearts of less than average weight Lewis reported that small circulatory systems were discovered to be characteristic of the hebephrenic and catatonic dementia precox group and that this feature was independent of age color sex duration of psychosis or associated diseases He maintained that the circulatory systems had not only been arrested in development but lacked the ability to react by a satisfactory compensatory hypertrophy, when the occasion demanded and often remained below the average size after developing valvular insufficiencies He stated that ordinarily in the normal subject the heart under usual conditions gets larger as age advances but this does not occur to any extent with the constitutionally small heart He stated that the various larger organs of the body in cases of catatonic and hebephrenic dementia precox, as compared with those from other major psychoses were not diminished in size in keeping with the small size of the heart Lewis reported also that his case studies of dementia precox had proved that histo-pathological changes in the endocrine glands particularly in the thyroid adrenals and gonads are as universally present as are the clinical symptoms in the cases The various aplasias, atrophies scleroses and patchy hyperplasias of these glands apparently do not depend upon age, duration of psychosis or the incidence of associated physical disease, and he concluded that these glands had suffered in the development of the personality so that their respective functions subsequently were performed imperfectly and aberrantly He offered the suggestion that it was just this type of inherited constitution the inadequate underdeveloped circulatory system and the deficient tissue stuff" composing some of the endocrine glands and

allowing for early aplasias multiple glandular scleroses and dysfunction which renders an individual in danger of developing the precox psychosis at puberty or if then escaped at some subsequent period of more severe physical chemical, psychic or social stress It was felt that the 'precox constitution with its deficient defensive forces being usually associated with a sluggish lymph stream (lymphatism) might also explain the high incidence of tuberculosis in these cases He pointed out that the knowledge of the presence of these fundamental organic peculiarities composing the soil in which the disordered mental habits arise should interfere in no way with the dynamic conceptions of the mental disease nor discourage the all important studies on mental mechanisms He pointed out the desirability of thorough studies of the personality makeup in order to enable the selection of a properly protected environment thus reducing as far as possible the exciting factors He suggested also the institution of psychotherapy and of glandular therapy when indicated It was believed certain that preventive and corrective measures should be instituted early in life since in many cases structural changes in the central nervous system and secondary scleroses of the defective endocrine glands tend to form early and indicate permanent change

Fulstow reported that 49 per cent of the males and 66 per cent of the females of a total of 179 cases of dementia precox had hearts weighing less than 300 gm as compared with 1 per cent of the males and 50 per cent of the females dying in a general hospital who had hearts weighing less than this amount Fulstow s report however does not segregate the various clinical types

Mott claimed that in dementia precox the usual finding was a regressive atrophy of the seminal tubules and a tendency to arrest of spermatogenesis He stated that a case of senile dementia of 80 showed more microscopic evidence of virility than any one of his [illegible] cases of dementia precox Mott considered these findings in the testicles as evidence of an inherent lack of germinal energy and he looked upon dementia precox as a primary nuclear degenerative process with no inflammatory reaction but with a hypofunction of the body tissues generally He thought that the cause of dementia precox would seem to be an inborn germinal defect the nature of which was not known

Kirby and Gibbs in a study of reproductive glands in dementia precox found that by external examination of the testicles of 186 cases of dementia precox 56 per cent were considered of abnormal size

47 per cent to have an abnormal consistency and 31 per cent to be of both abnormal size and consistency For control groups they used cases of manic-depressive psychosis and general paresis and found that the testicles of the manic-depressive patients showed 46 per cent abnormal in size, [illegible]2 per cent abnormal in consistency and 1[illegible] per cent abnormal in both and that cases of general paresis showed 4[illegible] per cent abnormal in size, 58 per cent abnormal in consistency and 28 per cent abnormal in both From these methods of examination it appeared, therefore, that one could not find a clear-cut distinction between cases of dementia precox, general paresis and manic depressive psychosis

Lewin in a special study of the endocrine organs in schizophrenia in comparison with material from other types of psychoses found that the change of fibrosis with degeneration of the germinal tissue was not specific to schizophrenia but occurred as a concomitant of chronic tuberculosis, cancer, syphilis or other chronic disease He pointed out that some at least of Mott's cases and also those of Lewis had had tuberculosis and stated that these facts seemed to vitiate the explanatory value of the theories expounded by Mott and Lewis Cases with underdeveloped testes appeared to have had a dementia precox reaction engrafted on an underlying mental deficiency On the other hand 5 of 7 pairs of non-fibrous well developed testes were from old dementia precox patients ages ranging from 59 to 75 with a duration of psychosis from 23 to 36 years These 5 old cases of long duration showed surprisingly good gonadal preservation When compared with testes from the group of senile or arteriosclerotic patients of the same age, they looked singularly young and well preserved

Lewin in his study of the testes could not differentiate between the hebephrenic and catatonic group on one hand and the paranoid on the other as Lewis had reported He stated that some of the best preserved specimens in his collection came from the hebephrenic group, and some showing most alteration were from the paranoid group

In Lewin's examination of the ovaries of dementia precox women compared with other psychotic women he found that even in the aged and middle aged dementia precox patients there was no difference from ovaries from women of the same ages in other groups From this material he felt that the importance of tuberculosis in reducing the activity of the ovaries should be emphasized

From the examination of 105 hypophyses which included 30 cases of dementia precox and the remainder from other diagnostic groups

Lewin reported that there was no consistent or general change by which the glands from cases of dementia precox could be distinguished from any other group

From the examination of 112 pairs of adrenal glands, which contained 26 pairs from dementia precox patients and the remainder from other psychiatric groups Lewin reported a wide variety of findings but none of them constant or peculiar to the dementia precox group The changes observed in these glands were considered not peculiar to the dementia precox group and where not associated with chronic disease and old age were of uncertain significance

Of 109 thyroid glands examined 30 from cases of dementia precox Lewin stated that it was possible to generalize in regard to them by saying that they were almost all fibrous whether from dementia precox cases or not Lewin thought therefore that any changes in the thyroid glands in dementia precox had best be ascribed to fibrosis or to the factors which determine the latter rather than to agenesis, aplasia or other deficient development He felt therefore that it was impossible to show that there is any connection between endocrine organs and schizophrenia but it was probable that most of the changes, which were found in his material were the result of intercurrent and chronic disease especially tuberculosis and that such changes that have been reported by other observers seem to be the results of the same condition He felt that only when a large number of cases of dementia precox in which the factor of intercurrent disease was completely absent had been collected and studied, could anyone be able to say that changes in the glandular organs are connected with dementia precox

Many other studies have been carried out on the physiological processes in cases of dementia precox Raphael and Parsons found that the sugar tolerance curve in dementia precox tended to vary from the normal in that the initial fasting level was lower the acme was relatively high and the return to the primary level took more than three hours there being a very definitely delayed tolerance This was found however in patients in the acute phase of dementia precox A case of dementia precox however of 17 years duration and in a stationary condition with a very mild degree of deterioration showed a perfectly normal curve. They concluded that among cases of dementia precox tolerance curves vary according to the phase of the clinical course Whitehorn found in an investigation of 10 dementia precox patients compared with 10 nurses as a control group that at the end of a two

hour period the patients' plasma sugar content averaged 155 per cent of the initial fasting level whereas the normals' plasma sugar level averaged just the same as the initial fasting value There was no failure, however, in the phosphate carbohydrate mechanism In the same two hour period the inorganic phosphates of the patients' plasma were reduced to 73 per cent of the initial value, while those of the normal individuals dropped only to 90 per cent Whitehorn noted that in one patient, whose plasma sugar and phosphates returned nearest to the initial values in two hours, there was a clinical difference from the other patients in that he displayed a greater physical activity in his daily life It was suggested that biochemical characteristics may determine the type of behavior even within the same diagnostic group or vice versa

Bowman made a study of 24 cases of dementia precox with the special point in mind of using tests that would in general have some relationship to the activity of the endocrine glands Roentgenograms of the skulls were negative in practically all of the cases Roentgenograms of the heart were considered normal in 14 cases, and in 7 the heart was of the "dropped" type and in 2 the heart was considered 'long and narrow" There was no abnormal thymus shadow in any case The basal metabolism determined in 23 cases showed readings in 11 cases from minus 1 to minus 10 or low normal readings Some other patients showed marked reductions on single readings, but where readings were repeated, results showed a variation from low to high readings, the same inconsistency in basal metabolic readings that was shown in our Institute cases Bowman reported that of 2[illegible] cases 12 showed a normal blood sugar curve and 9 showed a high sustained type of curve The conditions of the patients under which these tests were made were not stated, however The findings indicate that there is no particular consistency in the group of dementia precox reactions The blood sugar curve, like the other reactions, probably is an individual reaction of the patient

Bowman's examination of the blood included the determination of the non protein nitrogen, urea nitrogen uric acid creatinine amino acid nitrogen rest nitrogen fasting blood sugar calcium phosphorus and chlorides His conclusion from this study was that in general it can be stated that 'findings were within normal limits in practically all cases and that a study of the blood chemistry in schizophrenia shows no deviation from the normal'

Blood counts were made in all cases and in general were within

normal limits. The conclusion was that "it would seem that the cellular elements of the blood in schizophrenia are essentially normal." The phenolsulfonphthalein test of kidney function was normal in all cases.

Because of the frequently seen inactivity in cases of dementia precox with cold clammy skin and cyanosis of the hands and feet, it has at times been assumed that schizophrenia might be explained from a biochemical standpoint on deficiency in oxidative processes in the cerebral cortex and that there might be in dementia precox a generalized inherent tendency to deficient oxidative processes. Moreover, studies of the effects of low oxygen on the development of hallucinations and delirium and at times stupors and unconsciousness seemed to support the viewpoint that the physical and perhaps the psychological symptomatology of dementia precox might be due to these deficient oxidative processes.

However, a study carried out by Hinsie, Barach, Harris, Brand and McFarland on the treatment of dementia precox by continuous oxygen inhalations did not support these assumptions or the previous conclusions of Segal and Hinsie that dementia precox patients who showed peripheral cyanosis had a lowered oxygen content of the arterial blood and lower arterial oxygen saturation. Nineteen catatonic patients were studied. In 15 observations of the gas content of the blood before treatment the arterial oxygen content and oxygen saturation were within normal limits in 1[illegible]. In only [illegible] cases was there a very slight decrease from the theoretically low level. This was in spite of the presence of considerable cyanosis in these patients. There was no evidence, therefore, that the supply of oxygen to the tissues from the arterial blood was impaired.

The arterial carbon dioxide content of the blood was within normal range in all of these patients studied and in general was not elevated in any significant manner by long continued residence in an atmosphere containing 50 per cent oxygen. In the patients who were treated with prolonged residence in a 50 per cent oxygen chamber there was generally a decrease in circulating hemoglobin of 10 to 15 per cent. The response was similar to that in normal animals. Blood chemistry studies showed no effect of long continued oxygen inhalation on the urea nitrogen, the uric acid or the blood sugar content of venous blood. Basal metabolic determinations varied so much and so inconsistently, not only from patient to patient but in the individual case during the control and oxygen treatment periods, that no conclusion could be made concerning the effect of oxygen inhalation on the metabolic rate.

One may conclude, therefore, from consideration of the facts that have been brought forth regarding the influence of somatic constitution in dementia precox that there is some evidence, in some cases at least that dementia precox reactions develop on a constitutionally defective basis the deficiency showing itself in lack of complete somatic development or adequate response but that there is no uniformly consistent somatic defect or inadequacy to be found from case to case or in groups of cases that base the psychological reaction on a definite somatic foundation

Cerebral Pathology

As we previously indicated, Kraepelin called attention to acute and chronic nerve cell and neuroglia changes in the brain in cases of dementia precox that had been reported by various investigators, and in rejecting the idea that the clinical symptoms of dementia precox might signify nothing else than the gradual failure of an inadequate constitution he maintained that morbid anatomy disclosed not simple inadequacy of the nervous constitution but destructive morbid processes as the background of the clinical picture

In 1916 commenting in the annual report of the Manhattan State Hospital on our findings at autopsy of 25 cases of dementia precox we said There is a good deal of variety in the gross appearance of the brains of these dementia precox patients Some, more particularly the younger patients it seems present brain pictures which suggest deficient development, on the other hand, the brains of patients who present similar clinical pictures may have a very good appearance and it is a matter of remark that the brains of long-standing cases of dementia precox in different series show often no gross conditions which can be considered abnormal The histological studies in these cases have revealed no evidence that there are characteristic or specific cortical changes for dementia precox'

In 1921 we made a review of the reports of brain changes in dementia precox which had been made by workers to whom Kraepelin referred particularly Alzheimer, Goldstein Sioli Klippel and Lhermitte and Wada in addition to those reports that had been made by Cotton and Southard in this country In view of these reports we felt that the following were fair conclusions

No specific or characteristic gross or microscopic changes had been

demonstrated in the brains of dementia precox patients The accentuation of nerve cell loss in the second and third cortical layers had not been confirmed by other observers The other reported brain changes namely diffuse nerve cell alteration or loss neuroglia cell and fibre proliferation accumulations of fatty and waste products in and around the nerve and neuroglia cells and in and along the vessel walls may be found and frequently are found in the brains of those dying with other mental disturbances or without psychoses

It was not considered that the demonstration of histological alterations in the brain proved that dementia precox is primarily an organic brain disease The ever present difficulties of interpretation of findings in neuropathology are enhanced in dementia precox by the long duration and variability of the mental and physical symptoms and by the frequent entrance before death of severe acute or long standing physical diseases which in themselves may bring about cerebral alterations Consequently we were unable to determine with any definite certainty whether or not the brain changes had preceded accompanied or followed the mental symptoms or whether they were of significance in the clinical picture Because of these difficulties we felt that we did not know the cause or causes of the reported cerebral changes in dementia precox.

It was considered that evidently from a lack of appreciation of the difficulty of making correlation between disordered brain function and altered structure much had been set down as certain regarding the pathology of dementia precox that must still be considered problematical

Later, in 1921 we made a further study of the brain changes by matching cases of dementia precox with manic depressive cases dying of similar conditions at similar ages Such manic depressive material was used because of the ab ence at that time of normal control material and also because of the fact that the general manic depressive reactions were not considered due to organic brain disease Conclusions at that time were reached to the effect that in long standing cases of dementia precox a nerve cell loss was not evident as compared with cases of manic depressive psychosis of similar age and cause of death, that frequently identical nerve cell changes were found in manic depressive cases and cases of dementia precox that a marked variability in the nerve cell appearances was present not only from case to case but in different microscopic fields of the same case that there was no uniform or constant cortical or individual nerve cell picture in dementia precox

which would enable one to distinguish such a case from one of manic depressive psychosis It was considered as unproved that the nerve cell changes found were essential to the clinical picture of dementia precox as it could not be definitely stated how much of these changes might be due to ante-mortem physical disease, post-mortem alterations or technical procedure It was stated that the study had emphasized the importance and necessity of obtaining dementia precox brain material, which had not been affected as far as could be known by acute or chronic physical disease, and which was as free as possible from the objection of post-mortem change, and of comparing this with similar material from normal persons It was felt that until positive results should be found in such dementia precox material as compared with normal material we would hardly be justified in looking on dementia precox as an organic brain disease

Dunlap made an extensive and intensive study of the brain changes in dementia precox compared with controls Over a period of years an attempt was made to obtain suitable dementia precox brain material The conditions to be fulfilled were that diagnosis must have been free from doubt, patients must have been not over 40 years of age, they must have died of some acute process sudden death by suicide or accident and not from any wasting disease such as tuberculosis autopsy should have been done immediately after death, if possible Eight cases out of a total of 31 received were selected by Dunlap for special study as coming somewhat near these ideal conditions The control material consisted of the brains of 5 non-psychotic persons, one of whom had been killed in an accident another had been shot, 2 had been poisoned by arsenic and a fifth had died of acute peritonitis after five days' illness All of the patients and all of the controls had been not more than 45 years of age at death He reported that the nerve cells in the two groups looked very much alike and when the slides were mixed it was not possible to pick out the cases of schizophrenia The nerve cell changes that had been described by other authors were found but could all be demonstrated in the control material, denser spots and rarer spots were reported as normally present, and the rare spots in the controls resembled in all respects the "dropping out" areas considered pathological by some writers The important point at issue seemed to be in deciding whether the so-called lesions found in schizophrenia are valid lesions For him the changes in the brain of schizophrenia were not only inconstant and non specific but they were such as may be found in any series of

control cases, in other words their significance for the disease process seemed to be without importance

Spielmeyer, who had spent many years in the study of brain changes in dementia precox indicated that the problem was so difficult that many investigators of greater experience had discontinued their work along this line and that he himself had done so because he felt the question appeared to be insoluble He confirmed Dunlap s findings however that nerve cell losses found in dementia precox and considered significant for the disease by some authors were found also in undoubtedly normal cases including executed individuals and soldiers who were killed during the war The suspicion therefore occurs that many of the findings described in dementia praecox are in reality the same as those observed in normal cases'

Spielmeyer also called attention to the fact that lipoid deposits in glia cells and in the vessel walls which are often considered a sign of pathological disintegration in dementia precox had been found by him among normal young individuals and that therefore it did not appear that such findings in dementia precox were pathological He also called attention to the fact that fresh linear areas of softening described in acute cases of catatonic dementia precox and considered to have significance for that disorder had been seen also by him in the brains of persons dying from the most varied causes and occurring in the most varied diseases He considered these latter lesions due to circulatory disturbances corresponding to a pathophysiological mechanism

Spielmeyer however not only refused to accept a negative proof of the functional essence of schizophrenia but like most German authors he maintained that psychic disturbances also have their substratum in cerebral changes however indirect and asserted that there were old phases and fresh attacks of disease in which the effect of a fatal organic disease must be assumed He mentioned that in the acute stages active destructive phenomena are found in nerve tissue with progressive and regressive changes in the glia and often abundant destructive products this in spite of the fact that he reported these changes in normal persons dying of accident or disease He did not believe that the changes found in the brain isolated the disease process or established it as an entity He felt therefore that a pathological anatomy of dementia precox had not been determined

The Werthams in their chapter Is There a Histopathology of Schizophrenia discuss the findings and conclusions of various authors

and changes which have not been referred to previously by us. The alterations reported from Von Monakow and Katabayashi in the choroid plexus in dementia precox, namely, atrophic changes, exudates, changes in the epithelium, etc., are commented on by the Werthams, who record that such changes are so frequent in routine autopsy cases in a general hospital that it would be exceedingly difficult to determine just where they begin to have any pathological significance. The Werthams mention that very marked alterations in the plexus may occur in individuals dying from the most diverse causes with no mental disease whatsoever. They report that they have found such changes also in normal animals.

Their summary statement on the histopathology of schizophrenia, with which we are in agreement, may be quoted:

'On the ground of anatomical facts there is no justification for speaking of an 'organic cerebral process' in schizophrenia. Even the term 'process' is not warranted. This expression is used in histology to indicate a succession of events, a processus. But in the lesions described in schizophrenia, such as diminution of nerve cells, we know nothing of any process. A static anatomical phenomenon, a defect, is correlated with a clinical condition whose chief characteristics is (in the final analysis) that it is not a simple defect, but is, in the most clear cut cases, a slowly progressing condition. The statement has been made that although we do not know 'the' anatomy of schizophrenia, we do nevertheless know 'an' anatomy of schizophrenia. In other words we may not yet be able to make the differential diagnosis of schizophrenia cases on the basis of the anatomical data, but we know that anatomical data exist to prove the organic nature of the disease. Even such an equivocal attitude is not justified by the facts. It is just the expression of a preconceived idea, the same one that made Nissl believe in the anatomical basis of hysteria. If the brain is regarded as an organ in a way similar to that in which any other organ is regarded, it is impossible to avoid the conclusion that all the neurohistological data described for schizophrenia are irrelevant and have nothing to do with the schizophrenic process, whatever that may be. The histological data offer no valid authority for the statement that schizophrenia is an organic brain disease. There is, today, no histopathology of this condition.

'To draw from this negative statement the conclusion that of necessity schizophrenia cannot be due to any organic factors and must subsequently be of psychogenic origin would be hasty and unwise. Anatomical data do not permit us to make any such deductions. In cases of severe

intellectual retardation in an adult we may not find any histologically demonstrable changes in the central nervous system, but from this we would not conclude that the life experiences have caused the condition In the same way the absence of histologically demonstrable pathological changes does not allow us to make any statement about the basis on which the pathological development in schizophrenia takes place'

Course And Outcome

The introduction and utilization of the various forms of so called shock therapy during the past ten years has stimulated intensive and extensive interest in the treatment and has changed to some extent the views of course and outcome In subsequent pages we wish to discuss these forms of treatment and particularly the results reported Because of the emphasis that has been laid recently on shock treatment there is a tendency to conclude that nothing else is of avail in this group of disorders and that if shock treatment is not carried out nothing can be done to benefit dementia precox patients We wish to show that such a conclusion is false and unfounded and to try to make this clear we wish to reiterate here some of the facts regarding course and outcome that were described in the previous edition (1936) of this chapter They show that before shock treatments were developed dementia precox was by no means always a chronic progressive deteriorating disorder for which nothing could be done aside from continued life long hospitalization Furthermore obviously all cases of dementia precox that might benefit by the shock treatment will not have it available There are, and will be others who will not improve by shock treatment It would be unfortunate if these groups of patients were assigned to the realms of the hopeless and incurable with no therapeutic prospects The pre shock period picture was not a rosy one but nevertheless it was not all black

Just as we do not know how many persons exist in the community whom psychiatrists diagnose as suffering from dementia precox so we do not know accurately how many cases of dementia precox develop in the community and recover without hospitalization and therefore without being statistically recorded From medical histories that we obtain and from other sources we feel that there is good evidence to substantiate the impression that abnormal reactions not infrequently episodic which psychiatrists call dementia precox reactions occur in adolescents

and adults without hospitalization We have also indicated previously that in all probability there is a large number of cases of the simple form of dementia precox living in the community without recognition as such, they may have episodes without hospitalization and with remission to their previous rather simple state of deterioration

They show that before shock treatment was developed from the statistics of the hospital dementia precox admissions we obtain a more definite view of the course and outcome of dementia precox reactions For example of 5,931 patients discharged from the civil hospitals of the New York State Department of Mental Hygiene during the year ending June 30, 1933, 1,561 were cases of dementia precox, 85 or 5 per cent of the number discharged were considered recovered and this condition usually was so recorded after the patients had been on parole from the hospital for not less than a year, 549 of these discharged cases of dementia precox were considered much improved, and 534 were considered improved Fuller made a study of what happened to mental patients after discharge from hospitals in New York State, and in this study it was found that of 242 discharged cases of dementia precox 88 of them had remained continuously in the community over a period of 10 years, 18 others were in the community at the end of this period but had meanwhile been readmitted and again discharged and 96 were again in civil state hospitals, 21 died during the 10 year period in the community and 10 had died in mental hospitals during that period On a percentage basis this would show that 43.8 per cent of this group of patients who had been discharged from civil hospitals were still in the community after 10 years, 43.3 per cent were again in mental hospitals and 12.8 per cent had died

The recovery rate for cases of dementia precox in the civil hospitals of the Department of Mental Hygiene for the year ending June 30, 1933 for each 100 dementia precox admissions was 2[illegible] per cent The figures in Table II taken from Fuller show the percentage distribution of 1 200 dementia precox patients of both sexes at various periods after first admission

Table III taken from Fuller and Johnston gives some indication of the duration of hospital life and outcome Of 2 481 admissions diagnosed as dementia precox it seemed of some significance that 7 4 per cent of these patients or 68[illegible] had a hospital residence of under one year and 346 of them were discharged as recovered or improved during that period It is also to be pointed out that at the end of 16 years

TABLE II

	In hospital	Died	Discharged	
			Not later Readmitted	Later Readmitted
End of first year	69.4	3.8	18.5	8.3
End of second year	62.3	4.9	24.2	8.6
End of fifth year	54.0	8.0	29.9	7.2
End of tenth year	46.0	1[illegible].8	32.2	4.0
End of fifteenth year	38.4	25.0	35.3	1.3

9.8 per cent were still in the hospitals. The table does not indicate how many of these patients will live 30 or 40 years in the hospitals, as some of them do.

Strecker made a special study of 186 consecutive admissions diagnosed as dementia precox admitted to a private psychiatric hospital; 38 of these patients, or 20 per cent, were considered recovered, the average symptom-free period of this group being upward of 5.5 years. Of 193 cases of dementia precox discharged from the Psychiatric Institute and investigated by Horwitz and Kleiman, 171 were contacted not less than 8 months after discharge. Nine were considered recovered.

The above figures, taken from various sources, will indicate that an appreciable but *comparatively small number of dementia precox cases* were expected to recover, but that a much larger number ordinarily run a chronic, prolonged course in hospitals. Investigation showed that few if any cases with a simple form of dementia precox could be expected to recover. Their personality deficiencies are deeply rooted and it is difficult if not impossible to change them. The catatonic form showed the best chance for recovery, these reactions tending more than the other forms to be acute and episodic. A very small proportion of hebephrenic reactions recovered, but these types might, as we have previously indicated, have remissions of their symptoms so that they could be cared for outside of hospitals at a lower level of activity than normal persons engage in. Not a few of this class of patients might accept their hallucinatory experiences without striking reactions; women could go about their housework in a methodical way while more or less constantly hallucinating, and men sometimes occupied themselves with labor in similar hallucinatory states without strikingly abnormal behavior. The aggressive disturbed reaction of the paranoid forms might subside

TABLE III

DEMENTIA PRECOX

TOTAL DURATION OF HOSPITAL LIFE OF ALL FIRST ADMISSIONS 1909 1911 DURING A SIXTEEN YEAR PERIOD OF OBSERVATION

Total duration of hospital life	All first admissions		Outcome			
			Discharged as		Died in hospital	In hospital at end of period
	Number	Per cent	Recovered or improved	Unimproved		
Under 1 year	682	27.4	346	236	98	2
1 to 2 years	1[illegible]9	[illegible]	97	37	40	5
2 to 3 years	110	4.4	46	17	43	4
3 to 4 years	[illegible]	3.1	22	8	42	5
4 to 5 years	[illegible]8	3.1	28	7	36	7
5 to 6 years	55	2.2	8	1	34	12
6 to 7 years	[illegible]0	2.8	8	4	52	6
7 to 8 years	61	2.5	8		41	12
8 to 9 years	66	2.7	10	3	47	6
9 to 10 years	56	2.3	8		37	11
10 to 11 years	5[illegible]	2.3	11		37	9
11 to 12 years	5[illegible]	2.3	9	1	32	15
12 to 13 years	42	1.7	11	1	22	8
13 to 14 years	40	1.6	2		24	14
14 to 15 years	56	2.3	3	1	28	24
15 to 16 years	56	2.3	2		29	2[illegible]
16 to 17 years	730	29.8	1		16	722
All durations	2481	100.0	620	316	6[illegible]8	887

over a period of years and these patients in showing less striking reaction to their ideas could likewise get along fairly comfortably in hospitals or in the community, provided the environment was such that they were not put under too much stress and were not antagonized by those around them

The course and outcome apparently was influenced by various factors The previous personality of the individual was considered to be of importance as a prognostic criterion A person who had shown through his whole life little capacity for adaptation and little drive with few social interests but a marked tendency to introspection and phantasy,

did not have as good a chance for recovery or improvement as a person who had reached maturity with a fairly good adjustment and had shown thereby that he had a capacity for readjusting himself even if he did get into a temporary overwhelming psychotic episode

A slowly developing and progressing type of reaction did not in general have as good a prognosis other things being equal as an acutely developing stormy episode A study of our Psychiatric Institute material tended to show that a higher percentage of recoveries occurred in patients who have had a shorter duration of symptoms before hospitalization

In a dementia precox reaction developing with no apparent external cause there was not in general as good an outlook as for one that develops under particularly stressful external causes such as death of a near relation economic loss and definite frustration Dementia precox reactions developing in connection with infectious disease seemed to have a better prognosis than some of the reactions developing without physical disorder

Although we see many cases that seem hopeless for recovery in spite of all that is done for them the observation of remission of symptoms and social recovery in patients after what has seemed to be an irrecoverable course over a period of 10 years or more leads one to the conclusion that rarely unless one is dealing with a superimposed organic deterioration of old age is one safe in predicting that a dementia precox patient has no hope for improvement and that nothing can be done to bring about such improvement

Diagnosis

Although the diagnosis of dementia precox in fully developed cases may not be difficult difficulty not infrequently does arise in the recognition of cases in their early stages and with mild symptoms and in the differentiation from other psychiatric disorders It may be said that in general it is wiser to attempt to make a diagnosis not on a cross section of the symptoms but only after a careful history of the case has been obtained particularly facts of previous personality characteristics adjustment to stress and strain and also of the nature of the onset and development of symptoms

In children dementia precox may have to be differentiated from mental deficiency Family history may show more evidence of inferior

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4 to 5 years	,8	3 1	28	7	36	,
5 to 6 years	55	2 2	8	1	34	12
6 to 7 years	,0	2 8	8	4	52	6
7 to 8 years	61	2 5	8		41	12
8 to 9 years	66	2 7	10	3	47	6
9 to 10 years	56	2 3	8		37	11
10 to 11 years	57	2 3	11		37	9
11 to 12 years	57	2 3	9	1	32	15
12 to 13 years	42	1 7	11	1	22	8
13 to 14 years	40	1 6	2		24	14
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over a period of years, and these patients in showing less striking reaction to their ideas could likewise get along fairly comfortably in hospitals or in the community, provided the environment was such that they were not put under too much stress and were not antagonized by those around them

The course and outcome apparently was influenced by various factors The previous personality of the individual was considered to be of importance as a prognostic criterion A person who had shown through his whole life little capacity for adaptation and little drive with few social interests but a marked tendency to introspection and phantasy,

The manic depressive reactions at times are similar to those of dementia precox reactions and their differentiation may not be easy. The excitement of the catatonic form with its over activity and talkativeness resembles at times manic excitement. Here particularly the history of the personality and the onset assist in the differentiation but other points are that the patient showing a manic excitement tends to have his thought and activity directed outwardly; he is interested in his environment and reacts strongly to it; he remains in more or less good contact with persons and one feels that one can understand what he is doing. The excitement in dementia precox, however, is more bizarre, disorganized and disconnected, interest in the environment is apt to be much less, and the activity and thinking are determined more from within than from without. Thinking and activity therefore are more difficult to understand than in those with the manic reaction. For further discussion of diagnosis from manic depressive reactions see Vol. VII, Chapt. IX.

Benign stupor and catatonic stupor show many similarities but in the cases of benign stupor there is more apt to be a history of an external precipitating or stressful cause; the patient is more apt to be relaxed and less rigid or negativistic or resistant to care and attention than is the catatonic stupor patient.

Organic brain reactions at times simulate those of dementia precox. Patients in the early stages of general paresis may show signs of apathy, dullness or, on the other hand, hallucinatory states or paranoid ideas before definite signs of failure of memory or marked physical signs appear. The clinical picture may be misleading, particularly when there is a history of the personality of the type that may be expected to develop into dementia precox. A differentiation at times can only be made by a very careful physical examination including not only blood Wassermann test but complete spinal fluid examination. A combination of general paresis and dementia precox reactions is sometimes seen where under treatment of the general paresis the organic signs are essentially recovered from but bizarre hallucinatory or delusional reactions persist. Cases of brain tumor may show an apathy and dullness at times with hallucinations and suggest dementia precox until careful physical examination including x-ray investigation demonstrates the presence of a brain tumor.

Delusional and hallucinatory states occurring in connection with infectious disease may simulate dementia precox. One differential point

stock in the latter, and the history of the infant and child shows retardation generally in development, whereas juvenile cases of dementia precox are more apt to show a normal intellectual development with peculiar personality and behavior developing in childhood Adult feeble-minded persons show at times episodes of hallucinatory and paranoid ideas which transitorily may be quite similar to those of dementia precox The history of the case assists in the differentiation, and the prognosis of these attacks in mental defectives is not as grave as it is in dementia precox For further discussion as to juveniles see Vol VII, Chapt II

The differential diagnosis of dementia precox and the psychoneuroses at times presents difficulties As we have indicated previously, patients may show for many years psychoneurotic symptoms but eventually go on to deterioration of a dementia precox nature Initial symptoms of dementia precox may resemble those particularly of neurasthenia and psychasthenia with complaints of weakness fatigability, pressure in the head difficulty in thinking and gastrointestinal complaints As a rule however the two types of reactions may be differentiated by the facts that psychoneurotic persons not infrequently have a history of symptoms of neurotic traits from early childhood including fears and compulsions food fads night terrors etc whereas these are not found as frequently in the histories of cases of dementia precox Furthermore a psychoneurotic is more apt to show good contact with reality and with the environment, and he realizes that his symptoms are abnormal and that the difficulty is in himself The dementia precox patient, however, is poorly in contact with reality, his interests are more confined in himself than in the outside, he is mainly concerned with his own physical symptoms or complaints and is not inclined to see the difficulty within himself but is apt to ascribe it to environmental or other influences He is not as apt to recognize the abnormality of his ideas or his symptoms The psychoneurotic tends to distinguish between fact and fancy, the dementia precox loses that power of distinction and believes that what he thinks is real Ideas of reference misinterpretation of others, frequently go with these psychoneurotic complaints of dementia precox patients but are not apt to be seen in psychoneurotic reactions The psychoneurotic makes an impression of being much concerned about his situation and wishing to get well, the dementia precox appears more indifferent and is more inclined to accept the situation without trying to do much about it

at helping them externalize and socialize their interests as a matter of habit so that as they develop they may achieve an ability to meet external demands that are made on them rather than to withdraw more and more into themselves and live in the phantasy of dementia precox Such treatment or handling of children requires discretion and judgment however It is not felt that all introverted children necessarily become dementia precox cases nor do we consider it wise to attempt too energetically to drive children out of themselves There are many well adjusted valuable introverts and too strong attempts to make an introvert more extroverted may we feel lead to an unfavorable reaction on such a person s part inculcating in him feelings of inferiority and insecurity so that instead of helping him he may be inclined to withdraw more into himself However a careful judicious stimulation toward normal play activity and social contacts may we feel be an important factor in helping prevent dementia precox Too much protection on the part of the parents should be avoided and isolation of children from the play of others, because of the fear that they may learn something that is not proper or that they may be roughly treated is to be condemned We see too many cases of dementia precox who have not been given a chance by their parents or other relatives to assert themselves and to develop an independence that is necessary for adult achievement and satisfaction

Many adolescents and young adults that we see as dementia precox cases have never been given clear information about sex or sexual functions and have never been prepared for changes of puberty When they are struck at puberty with these changes in themselves they develop fears or panics or confusions which might have been avoided it is felt if a reasonable judicious fund of information regarding sex could have been given to them in their childhood or adolescence We find early cases of dementia precox who have the most bizarre infantile conceptions of sexual function and we learn not infrequently that any mention of sexual matters has been avoided in the family They have been misinformed by their parents about childbirth or have received disturbing misinformation from their associates One sees married women who have had no understanding of marital relations before marriage and who upon being faced with the marriage problem develop stormy dementia precox reactions sometime with a rejection of their husbands and anything pertaining to sexual function Because of such clinical experience one is impressed with the desirability of giving reasonable information

however, is that during the acute phase patients are apt to be clouded in their sensorium, and with such clouding the prognosis is not as unfavorable as when similar hallucinations or delusions occur in a clear sensorium These psychotic states may persist for some time after the infection and fever have subsided, they may be particularly frequent following influenza The previous personality characteristics capacity for adjustment as well as unconscious conflicts, determine whether such patients recover At times it appears that such infectious disease as well well as the disorders of pregnancy and the puerperium may be really precipitating causes for chronic dementia precox reactions Frequently a prolonged observation is necessary to determine the diagnosis

Acute alcoholic hallucinosis may clear up within a short time following abstinence from alcohol, but on the other hand in some alcoholic individuals what appears at first to be an acute hallucinosis becomes a chronic one with deterioration of interests and loss of emotional reaction which cannot be differentiated from dementia precox It may be found however that in the latter group of persons alcoholism has been the symptom of a dementia precox disorder

If dementia precox is looked upon as a group of reactions of abnormal personality and not as a disease entity it is not surprising that at times the symptomatology of these reactions which in the majority of cases leads to deterioration is similar to reactions of other groups of abnormal personalities such as the psychoneuroses which do not in the majority of cases lead to deterioration

Prophylaxis

It cannot be said at the present time that any specific procedure can be carried out which will prevent the development of dementia precox Histories of adult cases of dementia precox, however show so frequently what we consider the early or premonitory signs of dementia precox occurring in childhood that it is felt that emphasis should be laid upon the period of childhood as a period of prevention in dementia precox

Partly at least as a result of this feeling has been the development and extension of child guidance clinics and of psychiatric services in schools We find so frequently in our histories of dementia precox cases shyness bashfulness timidity rumination and active phantasy life in childhood that it is felt that dementia precox may be avoided in at least certain cases by attention to the handling of such children and attempts

at helping them externalize and socialize their interests as a matter of habit so that as they develop they may achieve an ability to meet external demands that are made on them rather than to withdraw more and more into themselves and live in the phantasy of dementia precox Such treatment or handling of children requires discretion and judgment however It is not felt that all introverted children necessarily become dementia precox cases nor do we consider it wise to attempt too energetically to drive children out of themselves There are many well adjusted valuable introverts and too strong attempts to make an introvert more extroverted may we feel lead to an unfavorable reaction on such a person's part inculcating in him feelings of inferiority and insecurity so that instead of helping him he may be inclined to withdraw more into himself However a careful judicious stimulation toward normal play activity and social contacts may we feel be an important factor in helping prevent dementia precox Too much protection on the part of the parents should be avoided and isolation of children from the play of others, because of the fear that they may learn something that is not proper or that they may be roughly treated is to be condemned We see too many cases of dementia precox who have not been given a chance by their parents or other relatives to assert themselves and to develop an independence that is necessary for adult achievement and satisfaction

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regarding sexual function to avoid misunderstanding and conflicts and possibly resultant dementia precox reactions

We find also not infrequently in our dementia precox patients that they have been urged to educational levels beyond their capacity or that they, through the influence of their relatives or associates have been drawn into fields of abstract thinking, philosophy and psychology which were beyond their capacity for understanding As they meet failure they are frustrated, confused and perplexed and become withdrawn and get their satisfaction in phantastic thinking or they may develop perplexed panics with attempts at suicide The understanding of the capacities of young people and guidance by schools or other advisors in activities that are within their capacities and that may lead to real satisfaction may, we feel, prevent some of the unfortunate outcomes Encouragement of what appears to be brilliant intellectualization in youthful persons to the exclusion of healthy competitive activity with similar age groups is unfortunate and may lead youthful persons not only to intellectual snobbishness but to a real inability to meet concrete demands of living Such failures appear not infrequently to be the precipitating causes of dementia precox reactions

Persons who have not shown previously a natural and normal interest in the opposite sex should not we feel be urged or forced into marriage particularly with the hope that it may cure them of some nervous symptoms they may have shown Such persons, when faced with the problems of married life particularly separation from the home to which they may have been deeply attached may develop panics or stupor reactions because of being overwhelmed by the demands for new adjustment for which they have no real desire and of which they are incapable Such persons had better be encouraged in the thought that single persons can be of much value and get much satisfaction in life and be comfortable and healthy in so doing

A healthy well adjusted person who has both external and internal satisfaction in his life does not develop dementia precox Any means that can be used to promote such satisfaction in living may we feel be useful in preventing the development of dementia precox

Treatment

In view of our conception of dementia precox as a group of reactions rather than a disease entity one cannot expect that there is any one

specific form of treatment for dementia precox In general the treatment involves an attempt at a thorough understanding of what the patient is trying to do and why he is doing it to help him solve his conflicts to clear up misunderstandings and to externalize and socialize his interests so that he may live in a manner that is satisfactory to him as well as to others Every effort should be made to treat or correct any physical disease or handicap

For those who are showing increasing signs of withdrawal from reality and contact with the external world efforts should be made to find the causes of this tendency and even if they cannot be found to encourage such persons in making contacts that are within their capacity For the boy or girl who is failing in school and developing physical complaints and perplexity and depression apparently as a result of this consideration should be given to his or her withdrawal from school and the finding of an occupation or situation in which he or she can be satisfied and secure Conflicts over sexual feelings and desires or sexual experiences should be cleared up by reasonable explanations Worries over masturbation and fears that have been inculcated by others of insanity or tuberculosis as a result of such a habit frequently may be dispersed by patient reassurance and explanation Ideas of reference frequently arise from feelings of guilt about such practices and may be prevented from further development by such reassurance and explanation

Even if conflicts and fears and false ideas which go on to delusional formation or hallucinations cannot be entirely eliminated by explanation and discussion patients frequently feel more comfortable and reassured if they realize that they have been in contact with somebody who apparently understands such things

Dementia precox patients apparently are open to suggestion and the suggestion that false ideas or unpleasant hallucinations will terminate may be followed by such termination particularly if the patient has complete confidence in the physician

Patients who develop stormy periods of excitement may be cared for in their homes if such homes can be arranged for segregaton of the patient and protection against self injury and suicide with constant observation and psychiatric nursing care Such provision can only be made by the well to do who are able to stand the expense of prolonged special care of this nature Other more docile and less active patients may be cared for in their homes under psychiatric nursing or

companionship of some person, who thoroughly understands the patient and in whom the patient has confidence If the patient shows antagonism to members of the family or panic from any contact with them obviously it is better to remove the patient from the family situation and public or private hospital care should be provided according to the means of the family After stormy episodes have subsided under hospital care, it is often possible to return such patients to their homes and for them to get along comfortably often at a lower level of activity than previously provided the family is an understanding one and does not continuously try to force the patient into a higher level of activity than he is capable of or than he wishes to adjust to

Habit Training

The habits of personal hygene in dementia precox patients frequently need intensive prolonged attention to prevent them from deteriorating or they need retraining, if habits have deteriorated to a stage which we frequently find in patients who are admitted to hospitals The program of training should include a definite time for arising in the morning supervision and direction of washing and combing of hair, regular toilet habits the patient being taken at regular intervals to the toilet for evacuation of bowels and bladder to avoid wetting and soiling which otherwise frequently develop and persist Nurses should be instructed to assist and guide the patients in their habits in personal cleanliness, holding the hand of the patient, for example while he brushes his teeth and guiding him in it and establishing him in the habit so that it will be continued Regular meal hours should be established and maintained Patients should be encouraged not to snatch food or to gulp it Other patients on the other hand who do not feed themselves should be patiently trained to do so, the nurse, if necessary guiding the patient s hands in the use of eating utensils and helping the patient carry the food to his mouth The patients should be guided and assisted in dressing and encouraged to get to the point of dressing and undressing themselves and keeping their clothes in order The furnishing of pleasing colors and wearing apparel of good material has been shown to be of sufficient stimulation to lead patients to cease destroying clothing that had no attraction for them

It has been shown repeatedly that dementia precox patients, who

have gotten to stages of marked disorganization of habits with no attention to or apparent interest in their personal hygiene and with wetting and soiling can be retrained by patient hourly, prolonged attention toward more organized habits so that they may take care of themselves in an orderly manner

Occupational Therapy

This form of treatment is at present one of the most widespread and apparently efficacious for the maintenance of interest in the outside world and its re establishment if it has been temporarily lost In hospitals the work has been organized to a high level by classes devoted to weaving basketry and a wide variety of arts and crafts The diversion of the dementia precox patient from his rumination and phantasies by construction or creation of something that means something to him is an important step in rehabilitation and prevents deterioration of interests which otherwise would occur in many case For the individual patient under care of a private physician at the patient's home the setting of a definite program of occupation and diversion with which to keep up a patient's interest is a very important part of the treatment The program must be arranged according to the patient's aptitudes and interests and effort should not be given up if the patient at first shows no signs of interest as experience has shown that sometimes after weeks or months of effort something may be evolved that will arouse the patient's interest and carry him on to a more normal activity

Physical Education

In hospitals physical education departments under competent well trained instructors are organized to stimulate the patient's interest in physical activities in exercise and competitive games This appears to prevent the deterioration of interests and also promotes more normal body activity and physical health A program of regular physical exercise is to be advocated for the care of individual patients under home care This of course must be adjusted to the physical strength and capacity of the patient but efforts should be made continually not to let the patient become inactive and lethargic

Physical Therapy

Under this heading are included the various means of treatment by light heat, electricity and water. Any or all of these methods may be of advantage in the treatment of dementia precox patients. Those, who are generally in poor physical condition with poor circulation may be benefited by neurocirculatory training, which comes from the use of hot air cabinet, followed by needle showers and the Scotch douche this treatment graduated to the capacity of the patient according to his response under treatment. Such treatment facilitates elimination, improves the circulation and apparently is a factor in increasing appetite as well as a general feeling of well-being. Ultra violet light radiation is another method that may well be used for the physical well being of patients who are in poor physical condition.

The continuous bath is used frequently in hospitals where continuous flow tubs are available particularly in the treatment of acute excitements of the catatonic and hebephrenic forms of dementia precox. The water is maintained at a temperature of 98° F. frequently under automatic control. This control is checked constantly by a bath thermometer. Patients should never be left alone in these baths. Patients who are too disturbed to remain in the tub may be surrounded by a single wrapped sheet and supported on a canvas hammock. Restraint in the tub is to be avoided if possible but it is considered that even if this is necessary to keep the patient in the tub, it is better to use this form than not to have the patient receive treatment in the tub. Possible collapse of disturbed dementia precox patients particularly during the summer hot months is to be carefully watched for. Indication of threatened collapse is a sudden rise of pulse rate, in which case the patient should be removed immediately. An ice cap should be placed on the patient's head particularly in warm weather. Patients may remain in such baths for eight and sometimes sixteen hours. After removal from the tub they should be given a warm shower and placed in bed. Maceration of the skin from prolonged exposure to water should be avoided by oiling the body. Continuous bath treatment may be carried out in private homes in suitable tubs. Continuous flow tubs are not necessary. This continuous bath treatment has a sedative effect on the patient. Not infrequently patients who have been very disturbed and most difficult to control may sleep under the influence of the bath.

Another form of hydrotherapy to use is the wet pack. The cool

wet pack consists of several sheets wrung out in water from 65° to 75° F. in which the patient is wrapped and surrounded by blankets. The response of the patient to such treatment should be watched carefully. The pack preferably should not be prolonged beyond two hours. This likewise has a sedative effect and the patients may fall asleep under such treatment.

Fever Therapy

Various methods for the induction of fever in the treatment of dementia praecox patients have been used. It has long been recognized that dementia praecox patients during the course of an illness with fever may appear to be improved and on the verge of recovery at times. The usual experience, however, has been that after the subsidence of such "natural" fevers the patients return to their previous state. There has always been the question of how much nursing and special attention contributed to the arousing of interest in such patients. Approximately the same results had been obtained with induced fever. Menninger in 53 patients induced fever by intravenous injection of typhoid vaccine. Although there was at first improvement and some patients were considered to have remissions, they relapsed later and he questions whether fever therapy produced any better results than might have been obtained in the absence of such therapy. Templeton, using malaria, concluded that the results of this form of treatment in dementia praecox were of no lasting benefit. Hinsie concluded that there were no permanent beneficial results in the general clinical picture of any of the 13 selected dementia praecox patients of the hebephrenic type but that, on the contrary, the ill effects were outstanding. The clinical condition of two patients was rendered worse and two others died. Our personal experience with the use of malaria in dementia praecox, reports of which were not published, agrees with the other writers, which is that only a mild temporary benefit, if any, is achieved for this method of treatment.

Tube Feeding

Dementia praecox patients who refuse to feed themselves or refuse spoon feeding and also those who are in a stupor require tube feeding. This procedure is carried out by the introduction of a No. [illegible] tube through the nostril and esophagus into the stomach. The food usually

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immediately quieter and before going to sleep becoming polite agreeable and talkative where formerly he was mute The drug is not looked upon as curative for dementia precox It tides patients over difficult periods and also places them in a more communicative less tense frame of mind and renders them more available for psychotherapy

Formerly the drug somnifen (diethyl dipropenyl barbiturate of diethylamine) was advocated in prolonged narcosis in the treatment of dementia precox It had some beneficial results but it is felt that in general it is not to be advocated in its use because of the unreliability of its action and its harmfulness the death rate in one series of cases treated was 6 per cent Prolonged narcosis may however be of benefit in giving a disturbed distressed dementia precox patient rest and relaxation and sleep Scopolamin luminal in prolonged narcosis has been used During a 24 hour period the patient is given an initial subcutaneous dose of scopolamin 1 mgm (gr 1/60) This is followed 3 hours later by 0 gm (3 gr) of luminal subcutaneously or by rectum with repetition of luminal every six hours This procedure is repeated for six or eight days

In 1935 Paul Hoch described results of other forms of prolonged narcosis in dementia precox In one method avertin a tribromethyl alcohol a powder easily soluble in water is used The dose is 45 mgm (¾ gr) per lb of body weight The drug should be administered by rectum With the avertin 1 c c of 1/1000 solution of adrenalin should be administred to counteract the lowering of the blood pressure The drug should not be used in aged individuals or those who show cardiovascular and renal system diseases One dose usually is sufficient to quiet a severe excitement The drug takes effect within 15 to 20 minutes and the effect lasts 6 to 10 hours For prolonged narcosis 0 2 gm (3 gr) of luminal is given 8 to 10 hours after avertin The luminal is repeated every 6 hours for the rest of the first day and is also given during the second day at six hour intervals The same dose of avertin is repeated on the third and fifth day During the remaining intervals up to the sixth day luminal alone is given

Pernocton a sodium salt of butyl bromallyl barbituric acid may be substituted for avertin being given intravenously intramuscularly or subcutaneously in doses of 1 c c per 30 pounds of body weight The effect is said to be very prompt and lasts about 8 hours For prolonged narcosis the procedure with pernocton is carried out with a combination of luminal in the same manner as with avertin The advantage of pernocton is said to be that it is more powerful and less toxic than avertin

given consists of milk and eggs, to which olive oil may be added and also orange juice for a supply of vitamins Tube-feeding should be not more than one quart at a time, and if the patient is losing weight, it should be given twice a day Some patients may have to be fed in this manner over a period of years because of their refusal to take food in any other manner This method of tube feeding has much advantage over attempts to give food by nutrient enemata, this latter method is not to be advocated

Dementia precox patients, particularly those in catatonic stupor, require careful nursing with special attention to the cleanliness of the mouth bathing and prevention of bed sores The bowels should be evacuated regularly by enemata if necessary Signs of the distention of the bladder should be watched for carefully and the patient catheterized if necessary

Drug Therapy

Many dementia precox patients if the above procedures are carried out require no further treatment by drugs Many chronic patients are more or less active in hospital occupations and become regular in their habits of work and sleep For them drug therapy is not indicated The same applies to patients in similar conditions who are cared for in their homes However in other patients the acute excitements with tremendous overactivity and chronic disturbed disorganized states may call for special drug therapy to prevent exhaustion and injury to themselves and others

One of the best drugs that we know of for control of acute and chronic excitements is sodium amytal which for moderate overactivity and to produce sleep may be given in doses of 0 2, 0 4 or 0 6 gm (3 6 or 9 gr) at night, this being repeated during the daytime, if necessary A more rapid effect is retained by the intravenous use of this drug in doses of 0 5 to 1 gm (7 to 15 gr) Such use frequently will bring about immediate sedation and sleep in the most disturbed patients Such use may be repeated every 24 hours with careful observation, however of the pulse and blood pressure the latter is apt to fall with the use of this drug and respiration also will be decreased Experience has shown that the effect of the drug tends to diminish after repeated use With the use of this drug one frequently sees a striking transformation even at the beginning of intravenous injection, of an overactive patient becoming

Endocrine Therapy

The status of our knowledge of possible benefits of endocrine therapy in dementia precox still is too uncertain to try to draw definite conclusions. Reports of a low metabolic rate in cases of dementia precox do not necessarily mean that this is due to a thyroid hypofunction, and treatment by thyroid gland extract has not produced striking results, although in inactive lethargic patients with evidence of a lowered metabolic rate it may be worth trying. Some cases of dementia precox apparently can withstand a high dosage of thyroid of from 0.6 to 0.7 gm (10 to 12 gr.) a day without material effect on their pulse rate or other bodily activity.

Occasional cases of improvement following pituitary gland therapy have been reported as have cases also by innumerable other methods of treatment. The relation of possible improvement to therapy is rather an uncertain one because of other factors involved. It is well known that dementia precox patients who are withdrawn, idle and apparently indifferent may show increased interest in their surroundings when they are given special attention, particularly careful nursing and the attention of doctors. Such efforts, however, frequently are temporary, and patients are apt to relapse after the special attention has ceased.

Psychotherapy

It has been found repeatedly that dementia precox patients may show improvement if given intensive attention by individual physicians. Although it is sometimes said that dementia precox patients are incapable of transfer, experience shows that this is not so. Chronic deteriorated patients who have lost much of their interest in the outside world may not be helped extensively by psychotherapy, but young early cases may be benefited. The orthodox technique of psychoanalysis is not expected to be used in many cases, and Freud himself has expressed a disinclination to recommend the application of his system in the treatment of dementia precox. Others, Kirby, for example, felt that dementia praecox patients show a wide divergence in their syndromes, that some are capable of understanding the nature of their conflicts when it is shown to them, and they thereby gain an insight that enables them to re-establish themselves on their prepsychotic level.

Hoch studied the effects of scopolamin luminal, avertin luminal and pernocton luminal prolonged narcosis each with groups of 25 acute and 25 chronic dementia precox patients One acute catatonic patient was considered recovered following the use of the first two methods and one acute catatonic and one acute paranoid were considered recovered following the use of pernocton luminal method Practically the same number of patients (7 to 8) of the acute dementia precox patients were considered much improved following each method Out of 25 chronic dementia precox patients of various types no recoveries were obtained Four patients were considered much improved Hoch concludes "All acute schizophrenic patients with excitement, depression or apprehension are suitable cases for prolonged narcosis The most favorable results are obtained in cases of acute catatonic excitement Less favorable results are observed in stuporous cases and in mute manneristic catatonias with sterotypies and other psychomotor phenomena Quiet self absorbed catatonic patients are also suitable for treatment to lessen the autism and diminish the negativism In these cases the procedure employed is preliminary to a psychotherapeutic approach

Chronic or slowly developing forms of catatonia are not much influenced by prolonged narcosis While one is able to influence the hallucinations and the patient may become more accessible the effect is only temporary "

Prolonged therapy with large doses of sodium bromide was carried out extensively by Wright several years ago It was found that acutely and chronically disturbed dementia precox patients became not only quieter but better organized in their habits and behavior and in better contact for psychotherapy when doses of as high as 13 5 (00 gr) of sodium bromide a day were given over prolonged periods These patients did not develop rashes as they might with small doses but it is important that under such treatment the patient be ambulatory and that the dose be reduced when they begin to show ataxia in their gait Toxic effects could be eliminated by giving sodium chloride in water by mouth Occasionally these patients would develop a bronchopneumonia unless toxic symptoms were carefully looked for Dosage may be begun at 3 to 4 gm (50 or 60 gr) a day and increased up to the tolerance of the patient The use of this form of treatment transformed wards of chronically disturbed patients into groups of more orderly occupied patients and promoted recovery apparently, in some of them

progress of the disorder but may bring about social recovery even if such patients are not looked upon by psychiatrists as completely recovered.

Shock Therapy

Under the term "shock therapy" are included the hypoglycemic treatment of Sakel, the metrazol convulsive treatment of Meduna and the electric convulsive treatment of Cerletti and Bini. Inasmuch as others will present elsewhere a detailed discussion of the methods, physiology and clinical application of these forms of treatment, it is our purpose here to consider largely the results of these methods in dementia praecox. However, for orientation and as an introduction we may outline briefly the principles of the various procedures. The reader who is interested in having full details is referred to Kalinowsky and Hoch's volume on shock treatments; in it one finds a very extensive bibliography.

Insulin shock, or the hypoglycemic method of treatment, was introduced by Dr. Manfred Sakel, a German physician. In 1928 Dr. Sakel made his first attempts to treat mental illness by using large doses of insulin in the course of treating morphine addicts. It was his belief that insulin abolished the phenomena of irritation during abstinence from morphine because the nerve cells were blocked and their function quantitatively affected. In the treatment of addicts following the formulation of this theory several of the patients had hypoglycemic shocks which appeared to benefit them. This led him to believe that the hormone should have a beneficial effect on other excited patients, and after observing that hypoglycemia could be allowed to continue for relatively long periods of time without the occurrence of obvious permanent damage, he began the treatment of schizophrenics. After 5 years, during which time he had personal experience with the treatment of about 300 patients classed as schizophrenics, he reported that there were full remissions in 70 per cent of those cases in which the illness had not been of more than 6 months' duration and 40 per cent of "remissions with capacity to work" in cases where the illness had been of more than 18 months' duration. Physicians from other countries who had seen his work and read his reports instituted the use of the method, and this form of treatment soon became widespread.

Fundamentally, the treatment consists in giving an intravenous injec-

Kempf states that "the psychoanalytic treatment of repressed perniciously regressive, dissociated personalities produces astonishingly reconstructive results, when an altruistic transference can be maintained and the wish for insight is spontaneous that is comes from the patient This requires upon the part of the physician sincerity insight technical skill self-control and the capacity to win confidence and control transfer"

Campbell in discussing psychotherapy and the application of analytical doctrines says "Analysis may remove or modify the force of certain physical symptoms, it may help to modify the patient's attitude towards the persons of the environment, it may help to modify the relation of the patient to near relatives, it may reveal to the patient the roots of jealousies, antipathies infatuation, etc the origin of certain enthusiasms (esthetic religious) Some patients have a rather surprising insight into the general substitutive meaning of their disorder"

By no means have all dementia precox patients lost interest in or capacity for, understanding of their symptoms, nor are they free from desire to understand themselves and to solve their conflicts Not a few dementia precox patients realize very well that there is something wrong with them and seek aid and are eager to have it The physician often can be of help in arriving at such an understanding on their part In addition, the rapport that certain dementia precox patients can and very frequently do establish with physicians gives them support and confidence which they have not had before Experience shows that, although these patients may not be entirely rehabilitated they may be relieved of not a few of their distressing symptoms and be able to live much more comfortable lives in the community instead of existing in disorganized demoralized states in hospitals It is too early yet to say what may be the ultimate benefit to be derived from the application of psychoanalytic principles in the understanding and treatment of dementia precox but it is felt that we have sufficient knowledge at the present time to advocate such an application and understanding in not a few cases of dementia precox

In brief then, one may say regarding the treatment of dementia precox that the previously held attitude of therapeutic nihilism is not only demoralizing for the physician but is unjustified from experience that dementia precox patients deserve all of the proper therapeutic procedures that can be directed to them and that any one method or combination of methods may not only prevent deterioration or the

pyknic type, their reactive character their defense mechanisms are more suited to overcoming schizophrenic injuries than those of the leptosomatic asthenic type One could not produce the pyknic type in schizophrenics but as most epileptics were claimed to be of the pyknic type it was felt that one might best reproduce their endocrine changes and reactions by producing epileptic convulsions in schizophrenics

In the use of metrazol about 0 5 grams in a 10 per cent solution is injected intravenously One or two seconds after the injection there follows a typical epileptic seizure which lasts from 30 to 80 seconds After the seizure the patient goes to sleep for several minutes but within about a half an hour regains full consciousness The treatment usually is given three times a week the number of convulsive attacks given depends upon the condition of the patient Some patients will improve a great deal after three or four injections others receive fifteen or more with or without improvement Meduna s first conception was that metrazol would be utilized only for dementia precox cases but his theories regarding the mechanism were not supported and metrazol was used extensively in other types of mental disorders

In 1938 Cerletti and Bini reported their results of the use of electric shock produced convulsions to overcome objections made with the use of metrazol A special electrical apparatus is used with special electrodes applied to either side of the head Alternating current is passed through the head the strength of current and time of passage varying with different apparatus used Our procedure was to use 50 to 150 volts for a period of 0 1 to 0 25 seconds The patient immediately becomes unconscious upon the passage of this current and develops an epileptiform convulsion with tonic and clonic phases Temporary apnoea is followed by relaxation and hyperventilation Consciousness is recovered gradually with perplexity or confusion lasting several hours and complete amnesia for the treatment and a short period preceding it The treatment is usually given three times a week for six eight or ten treatments depending upon the patient s condition The series may be repeated with benefit frequently

These three methods of treatment which appeared quite drastic made a deep impression upon psychiatrists in this country because of the extraordinarily favorable results which were quoted from their use in Europe

The extent to which shock therapy for mental disorders had developed in this country by 1941 is indicated in the published report by

tion of insulin to the fasting patient, the amount being gradually increased until the so-called "shock" or coma dose is reached. This dose then is repeated on from 5 to 6 days a week until the desired result has been obtained or the responses of the patient have shown conclusively that there will not be success. The duration of hypoglycemia on each day that insulin is given is determined by the patient's reactions but in general it is allowed to last for from 4 to 5 hours. Termination of hypoglycemia usually is brought about by the administration of sugar solution by mouth or nasal feeding but in cases of necessity intravenous glucose is given. In all cases it is advisable to give large amounts of carbohydrates after the termination of hypoglycemia to prevent the occurrence of shock later in the day.

An entire course of treatment seldom lasts less than 1 month and may last for as long as 5 months. In some instances patients improve partially, and often it is then difficult to determine when to stop treatment. Here again no arbitrary limit may be set for the duration of treatment, the decision resting on the physician's judgment and his previous experience.

The metrazol convulsive treatment was described first by Dr. Ladislaus Von Meduna, a Hungarian psychiatrist, in 1935. Metrazol or cardiazol (pentamethylenetetrazol), a synthetic water-soluble camphor-like preparation, in the customary therapeutic dose of 0.1 to 0.2 grams by intravenous or intramuscular injection is an accepted circulatory stimulant, but if this dose is increased five-fold there is a marked qualitative change in the effect, for the drug then reacts on the central nervous system and produces general convulsions. Meduna assumed from the observations of others that "epilepsy and schizophrenia at least in their classical manifestations are bound up with two opposite somatic types, that epilepsy and schizophrenia were rarely associated in the same patient, and that between epilepsy and schizophrenia there exists a sort of biological antagonism which must be expressed in the pathological course of the two diseases. Without being able to characterize these pathological reactions I feel justified in asserting a priori that these courses are either mutually exclusive or they do, at least to a great degree, weaken each other in their mutual effects." Meduna claimed further that the observation that schizophrenia in persons of pyknic habitus was more benign than if it occurred in the leptosomatic asthenic types could be explained scientifically only on the ground that "the endocrine secretions of the

used insulin it was reported that 96 per cent of them had treated dementia precox cases and 4 5 per cent of these had used the method also in manic depressive cases Of 175 hospitals using metrazol 80 6 per cent had so treated dementia precox cases and 7 6 per cent had used it for manic depressive patients One hundred and six hospitals had had experience with electric shock 79 per cent of them in dementia precox patients and 85 8 per cent of them with manic depressive disorders It was thus apparent that the hospitals tended to use insulin more for dementia precox and metrazol and electric shock for the affective disorders

No tabulation or summary was made of clinical effects from the questionnaire material except that it was shown that for each 1 000 patients treated by those methods the rate of complication and of death from insulin therapy was 19 7 and 6 2 respectively for metrazol 4 9 and 1 5 and for electric shock 10 8 and 0 5 It was thus evident from this large series that electric shock was safer and tended to be preferred over the other methods The United States Public Health Service has not duplicated a similar survey in later years and there has been none to our knowledge made by any other individual or group From reports of individual work however it appears that the trends shown have been continued that electric shock is generally utilized more than insulin or metrazol for treatment of emotional disorders However as we shall show later insulin seems still preferred by a majority of workers for the most effective treatment of dementia precox

Insulin Shock Therapy —In 1930 Sakel had stated that when the duration of the condition of dementia precox had not exceeded 6 months 70 per cent of the patients who received insulin shock therapy had had full remissions and were able to return to their former work while an additional 18 per cent had good remissions At the same time he pointed out that for all cases of dementia precox of over 6 months duration the results varied in direct relation to the duration of the illness It was of course felt in this country that if such results could be duplicated here there would be a tremendous relief to patients and their families and a very substantial saving in the cost of care of dementia precox patients in public institutions Soon after Dr Sakel came to this country arrangements were made by Dr Frederick W Parsons the Commissioner of the Department of Mental Hygiene of New York State to have him give a course of instruction in insulin shock therapy at the Harlem Valley State Hospital to physicians not only of the staff of that

Kolb and Vogel of the information received through a questionnaire sent out by the United States Public Health Service to make a "Shock Therapy Survey." The questionnaire regarding shock treatment was sent to 356 state, federal, city, county, private mental hospitals and general hospitals with psychiatric wards; 305, or 85.7 per cent, responded. The replies showed that 72 per cent had used insulin shock therapy, 75 per cent metrazol, and 42 per cent electric shock. The last had been used in many of the hospitals only since 1940. Insulin treated patients had numbered 23,651, metrazol had been used for 36,839 patients, and electric shock for 7,769. The estimated annual rate for 1,000 of all patients under treatment in each class of hospital was 14.5 for insulin, 22.8 for metrazol and 23.3 for electric shock.

At the time of the replies 10.5 per cent of the hospitals reporting were increasing the use of insulin, 27 per cent were continuing as before, 23 per cent were decreasing its use, and 34 per cent had discontinued using insulin which was being replaced by metrazol or electric shock or both. Insulin shock had been introduced in 1935, followed by metrazol a year later. After a lag of about a year both were taken up with considerable enthusiasm. Insulin reached its peak in 1938, when its use was reported by 54 per cent of the responding mental institutions; metrazol reached its peak in 1930 when 65 per cent of responding mental hospitals reported its use. Since these peaks, however, the rate of decline for metrazol has been greater than for insulin. Electric shock therapy first came into appreciable use in 1939 and was adopted more rapidly than either insulin or metrazol. It was being used by 42 per cent of mental institutions during October 1941, when its use still was increasing with no evidence of diminishing interest except in two hospitals, where is was discontinued upon the basis of doubtful or inadequate results.

In response to the question as to whether the various forms of shock treatment were valuable, with respect to insulin shock two thirds said "yes," about 7 per cent said "no," and over 20 per cent were undecided. As for the value of metrazol, 77 per cent of the institutions replied in the affirmative, 5.7 per cent in the negative, and 15 per cent were undecided. However, 76.7 per cent of the hospitals felt that electric shock was of value; none said it was not, but about 11 per cent were undecided. Sixty per cent of the hospitals that had had experience with all three methods indicated that they would use electric shock if only one form of shock therapy were available. From 147 hospitals that had

considered recovered at the end of the period for which reports were received 30 per cent additional were improved or much improved or a total of 4 per cent were benefited after treatment Approximately 60 per cent of the original group were found to be unimproved 43 per cent of these were in mental hospitals, 10 per cent had died and the balance were living outside of hospitals

It thus appeared that from comparison of the New York State insulin treated group with our non insulin treated group the former had at least temporarily somewhat the advantage in being associated with greater improvement of patients and it appeared therefore that the method deserved further use and study

To make such a study and to investigate other methods of reducing the number of mentally sick patients cared for by New York State in its hospitals the then Governor Herbert H Lehman appointed a temporary commission on state hospital problems under the chairmanship of Mr Homer Folks The present writer was one of the members of the original commission In 1944 the commission reported the results of its study of insulin shock therapy The Brooklyn State Hospital under the direction of Dr Clarence H Bellinger had been selected as the hospital in which an intensive study of the results obtained from insulin treated patients was made Such dementia precox patients treated between January 1 1937 and June 30 194 numbered 1 145 It had been obvious that a control group of non insulin treated dementia precox patients should be studied likewise Such a group could not be found in the Brooklyn State Hospital so that 5 metropolitan state hospitals were selected to furnish such a control It was impossible in these hospitals to match the number of catatonic dementia precox patients treated in the Brooklyn State Hospital However with respect to other forms the control patients were matched case for case according to sex age duration of illness and type of dementia precox The control group numbered 876 cases Follow up study was made by a comparatively large number of experienced psychiatric social workers Their period of study extended from July 1 194- to May 30 1943 The treated cases thus were followed up for a period of 5½ years to not less than 6 months after treatment The following tabulation outlines the results obtained

Left Hospital

Treated	906—79 1%
Untreated	515—58 8%

hospital but to physicians who were assigned for the course from other state hospitals in the Department The physicians then returned to their respective hospitals and carried out shock treatment on their own patients The results from these various hospitals were reported and pooled, and in 1938 Dr Malzberg, the statistician of the Department, reported that of 1,039 dementia precox patients treated by the Sakel method, 134 or 12 9 per cent were recovered one month after the completion of treatment, 282 or 27,1 per cent were much improved and 263 or 25 3 per cent were improved A total of 679 or 65 4 per cent of the patients had shown some degree of improvement after treatment with insulin An equal number of dementia precox patients in these hospitals used as a control group and not treated with insulin showed some degree of improvement in only 22 per cent There was confirmation of the European reports that patients with a shorter duration of illness responded best to hypoglycemic therapy, the reported rate of recovery decreasing from 42 9 per cent when the disorder was less than 1 month old at the time of treatment, 33 3 per cent, when it was of 1 to 3 months duration, to 3 4 per cent in groups of a duration of 11 to 14 years It is evident, however, that there was a wide variation in the results reported from the different New York State hospitals in spite of the fact that the physicians giving the treatment had had the same training in its use Malzberg reported that 510 of 1 039 insulin-treated patients had been paroled from the New York State hospitals and that up to the time of his report in March 1938 12[illegible], or 24 5 per cent had been returned

In considering this report from the New York State hospitals of the varied benefits derived from insulin treatment the question arose as to how much of a benefit or improvement in patients might have been due to the unusual, intensive attention that these patients were given during the treatment In an attempt to evaluate this my associate Dr Patrick H Drewry, and I made a study of the outcome of hospitalization in 500 dementia precox patients who had been treated at the New York Hospital, Westchester Division, (formerly known as Bloomingdale), between 19[illegible]6 and 1935 These patients had had the advantages of intensive study and treatment in this private, charitable comparatively small hospital before insulin was used The follow-up study covered a period of not less than [illegible] years to a maximum of 12 years after leaving the hospital It was found that at the end of hospital residence 7 per cent of the patients were considered recovered and 37 per cent were benefited by treatment Follow up studies, however, showed that 1[illegible] per cent were

considered recovered at the end of the period for which reports were received 30 per cent additional were improved or much improved or a total of 4 per cent were benefited after treatment Approximately 60 per cent of the original group were found to be unimproved 43 per cent of these were in mental hospitals 10 per cent had died and the balance were living outside of hospitals

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Results by Diagnostic Groups

	Treated			Untreated		
	Total	able to leave		Total	able to leave	
		No	%		No	%
Catatonics	676	545	80	407	55	65
Paranoids	369	93	79 4	369	19	5
Hebephrenics	90	61	67 6	90	55	58 9

Average Time in Hospital—Treated 6 [illegible] months
—Untreated 10 months

Average post treatment time in hospital of 906 treated patients was 3 2 months comparable time for untreated patients was 6 8 months Saving of [illegible]7[illegible] years hospitalization or 100 hospital beds for about [illegible]¾ years

The proportion of patients able to leave the hospital both in the insulin treated and untreated group decreased in direct ratio to the length of illness prior to admission

Number at Home at Time of Study July 1, 194[illegible] to May 30, 1945

	Treated		Untreated	
	No	%	No	%
At home	6[illegible]9	58 3	563	44
In hospital	451	41 7	461	56

Levels of Usefulness

	Treated	Untreated
Doing as well or better than before illness	364—35 7%	193— 34%
Doing well but with slight protection	[illegible]—[illegible]0 6%	141—17 1%
Family invalids	45— 4 %	29— 3 5%
Productive hospital invalids	90— 8 3%	96—11 7%
Less productive hospital invalids	13 —1[illegible] [illegible]%	153—18 6%
Deteriorated hospital invalids	[illegible]9— 1 %	21 — 5 7%

Over half, 54 37 per cent of the insulin treated patients were functioning as useful members of the community as against 40 5 per cent among the patients who did not receive any insulin therapy Of the insulin treated group previously employed 71 per cent returned to gainful employment as against 57 1 per cent of the untreated group

Eighty three per cent of treated patients released were still out for between 1 and [illegible] years against 69 per cent of untreated patients However after 4 to 5 years 39 per cent of treated and 5[illegible] per cent of untreated were out

As the Commission indicated in its conclusions the facts show conclusively that insulin shock therapy produces substantially better results in the treatment of dementia praecox than when insulin is not administered What is more striking good results were obtained even in those cases in which the prognosis without insulin is doubtful such as patients in the older age groups those whose illness was of more than three years duration and those with a gradual onset

Though differences in the response to insulin shock therapy by the various categories of patients exist all of them respond some to a greater and others to a lesser degree

Even among those groups in which the gains are minimal either as to the length of time they are able to remain out of the hospital or the level of usefulness they attain they are sufficiently positive to warrant the giving of insulin because of the benefit derived by the patient by his family and by the community and of the savings effected in hospitalization costs

The Commission advocated extension of the use of insulin in the state hospitals However the report of the State Department of Mental Hygiene for the year ending March 31 1944 showed that a total of 1 134 patients were given insulin shock therapy slightly less than the estimated annual total during the previous fiscal period it was pointed out that this reduction was due to a loss of nursing and medical personnel as a result of the war

In 1941 my associate Dr Hollis E Clow and I made a study of 50 dementia precox patients who had been treated at the New York Hospital—Westchester Division with insulin shock from December 1936 to September 1939 The time elapsed since the termination of insulin treatment varied from a minimum of 6 months to a maximum of approximately 2½ years We found that at the termination of insulin therapy no patient was considered recovered but 48 per cent were considered to show benefit and 5[illegible] per cent were unimproved At the end of the follow up period we found that 16 per cent were recovered with a total improvement rate of 36 per cent We were concerned at that time with the factors that might influence the prognosis for dementia precox even with insulin shock therapy and we studied the various

patients with respect to sex, age at time of treatment, pre psychotic personality, the adequacy of the precipitating cause, the character at onset, the duration of illness before treatment and the type of dementia praecox shown in the clinical picture As the result of this study we concluded that 'the dementia praecox patient, who has the best outlook for recovery or improvement following insulin therapy, is a male under the age of 30 who has had a comparatively adequate pre psychotic personality whose psychosis had an abrupt onset with a definite external precipitating cause He will have been sick less than a year before the institution of treatment, he will have shown an excited catatonic state without evidence of what we have called deterioration, which is defined as consistent lack of attention to personal habits bizarre behavior, disconnected thinking and apathy

Conversely, the patient not likely to benefit by hypoglycemic treatment will be a female over thirty, who with an inadequate personality insidiously and without definite external precipitating cause has developed over a period of more than a year before treatment a mixed form of dementia praecox with evidence of deterioration as defined above

Obviously various combinations of these prognostically good and bad factors will occur in different patients, and their relative predominance will have an influence in determining the outcome

It will be obvious that in this study of insulin treated cases we have found of good prognostic significance factors that long before the institution of this form of treatment were recognized as having such significance In other words patients, who will benefit by insulin treatment, will have the same characteristics as those benefited formerly with other forms of treatment This supports our conviction that insulin does not have a specific curative effect, but that it may bring about changes that accelerate or facilitate improvement in those who have the constitutional capacity for such improvement or recovery

It is our conviction that insulin therapy should be supplemented by psychotherapy occupational therapy and other psychiatric adjuncts suitably applied to give the patient the best opportunity for benefit

'The study of our series seems to indicate that with such extensive and intensive treatment of a group of cases of dementia praecox such, as constituted our material, 16 per cent may be expected to be recovered and about half to be benefited six months to two and a half years after insulin treatment The treatment of favorable cases, however, may result in

an improvement rate of 90 per cent at the end of the insulin treatment and of 80 per cent at the end of six months to two and a half years after treatment The results obtained in the group as a whole 16 per cent recovered and a total of 36 per cent benefited by treatment may be compared with results reported by us two years ago in 500 cases of dementia praecox treated in the same hospital and with the same methods with the exception of insulin viz 1 per cent recovered and 4 per cent benefited by treatment

For those who improved sufficiently to leave the hospital the median hospital residence after the beginning of treatment was four and a half months It seems reasonable to expect therefore that if a case of dementia praecox receives insulin therapy supplemented by other psychiatric adjuncts soon after admission to the hospital the hospital residence of such a patient may be appreciably shorter than if insulin therapy were not used

From 1936 to 194 we submitted 8 dementia praecox patients to insulin shock therapy 3 of these patients recovered and 4 additional ones were considered to show benefit so that a total of 40 of the patients were able to return home Fifteen of these patients were reported as having relapses after returning home but 11 after further treatment returned to the community recovered or much improved Thirty seven per cent of all the patients treated from 1936 to 194 were at home when last heard from up to December 31 1946

In 194 we discontinued the use of insulin for cases of dementia praecox This was not only because of difficulty in maintaining the treatment because of the shortage of medical and nursing personnel but was primarily because we felt that dementia praecox patients who were receiving metrazol and electric shock were doing as well Opinions which we will present later on do not agree with us with respect to the comparative benefits from insulin and electric shock but our figures speak for themselves The difference in the results from those obtained in other hospitals may be due to differences in the type of clinical material particularly with respect to duration of illness before treatment We accept by preference patients who have been ill a comparatively short time

Bond and Shurley in November 1946 report from the Pennsylvania Hospital Institute that of 309 schizophrenic patients treated over a ten year period in an insulin unit 48 8 per cent were recovered or much improved at the end of treatment 47 per cent at the end of the next

thirty days 43 per cent at the end of the first year and 37 per cent at the end of five years' 'This compares to a recovery much improved rate of 16 per cent for control cases under hospital treatment without insulin or other shock treatment"

Metrazol Convulsive Treatment—When metrazol was introduced in this country for the treatment of dementia precox the patients were allowed to have the resulting severe convulsions with little, if any, attempt to restrain their violent movements Fractures and dislocations were too common to seem to justify such a procedure as proper treatment Further rejection of the method resulted from reports that not a few patients, 41 per cent of Psychiatric Institute series showed compression fractures of the vertebrae These were not associated usually with disability or symptoms of cord pressure and many patients who were found by x ray to have such fractures, had no symptoms or merely transitory back pain We put ourself on record in our report of 1937 as being disinclined to use metrazol However, subsequently using with our own modifications the method of control of the patient, and especially hyperextension of the spine developed at the New York Psychiatric Institute we began the use of the method in November, 1939 and up to December 1940 we had treated 11_ patients From our experience we concluded that metrazol was a meritorious adjunct to other methods of psychiatric treatment and that undue hazards with use could be avoided During the treatments as we gave them there have been no fractures or dislocations of long bones, several simple dislocations of the jaw had been reduced during the post-convulsive stupor One patient suffered a chip fracture of the scapula with no serious consequences and no loss of function After-treatment x ray showed a compression vertebral fracture in a man who had a marked kyphosis preventing hyperextension during treatment transitory back pain was the only results Another fracture with moderate temporary pain and no loss of function occurred in a 64 year old woman who had an unusual configuration of the spine preventing the desired hyperextension during the metrazol treatment The majority of our patients treated with metrazol were diagnosed as having manic depressive or involutional disorders In those the beneficial effects were most striking However 8 cases of dementia precox were among the series We reported that from 3 months to 1 year after treatment 7 or one fourth were home three of these recovered and 1 much improved, 11 others were in the hospital in an improved condition Thus of _8 cases of dementia precox treated

with metrazol 18 appeared to have benefited by this treatment. Ten patients were considered unimproved. However, metrazol had two objectionable features. Its use entailed the repeated intravenous injection of the drug, often with annoyance if not distress to the patient, and possible thrombosing of the veins. Secondly, the momentary period between the injection and loss of consciousness was fraught with very distressing symptoms of tension with a feeling of impending death. If the dose was not sufficient to cause a convulsion, the patient was left in a conscious state filled with apprehension. For these reasons, when electric shock was introduced it rapidly gained way over metrazol, as we have already shown from the figures of Kolb and Vogel. Recently, from reports available, metrazol has been used essentially in the treatment of dementia precox in combination with insulin to bring about convulsions when the patient is in insulin coma and is not aware of the injection and the latent period. This method is reported to be beneficial in longer standing cases of dementia precox who have not responded with much benefit to insulin alone.

Electric Shock Therapy.—As might be expected, there are differing opinions regarding the use and results following electric shock treatment of the various diagnostic groups of mentally ill patients, and especially with respect to dementia precox patients. Clinical results depend, we believe, on the clinical material dealt with and the management of the patients before, during, and after the specific treatment.

It seems advisable for this discussion to present some facts and impressions which we have derived from our experience with electric shock treatment at the New York Hospital, Westchester Division. These will constitute a kind of summary of comments that we have made in the annual reports of the hospital from 1941 to 1945 inclusive. In subsequent pages we shall present the opinions of other investigators.

Electric shock was used first by us in April 1941, supplanting metrazol. Up to December 31, 1946, this treatment has been given to 304 men and 610 women, a total of 914 persons. The majority of the persons were suffering from emotional disorders in the treatment of which electric shock has shown itself remarkably helpful. The shock treatment of all the women patients has been carried out by, or under the immediate supervision of, Dr. Donald Hamilton, senior psychiatrist. Over several years Dr. Lynwood H. Heaver, former senior psychiatrist, treated the men patients. Since 1941 the same graduate nurse has been assigned full time to act as assistant to the physician and to direct the assisting men and

women nurses Thus there has been a stable "team" to carry out established practices and to benefit by their growing experiences

We have been more conservative than some investigators with respect to the number of treatments usually given in a "series", that is, 3 times a week without interruption Usually we have given not more than 8 treatments in a series For a group of 133 women patients the average number of shock treatments was 7, 85 had 8 or fewer convulsions 19 had more than 8, and the largest number given was 14 We do not agree that a minimum number of 20 convulsions is necessary, nor do we believe in giving 50 to 100 treatments without interruption to any patient After only a few convulsions are experienced, patients show varying degrees of confusion and loss of memory This increases with the number of treatments given and indicates a neurophysiological alteration How far such changes can go without their becoming irreversible we do not know, it is our purpose with our patients to avoid such brain damage Our patients have all recovered their intellectual functions after a lapse of time, and we have seen none who seemed permanently damaged Special psychological studies using the Wechsler Bellevue Intelligence Test and a revised Stanford Binet Form L on 25 men and 25 women before and after electric shock treatment showed that instead of a decrease in mental ability there was a statistically significant increase in the intelligence quotient scores following treatment The patients had improved clinically, the psychological test results seemed to indicate that although we did not know from actual tests what the intelligence quotients of the patients had been before they became ill the treatments had not caused organic brain damage During recent years we have admitted a number of chronic dementia precox patients who previously elsewhere had had 100 to 200 electric convulsive treatments They have appeared organically affected new concepts were not readily absorbed there was a kind of inertia about perception subtle perseveration and a hiding behind trite and rigid patterns of response These cases offered a problem of distinguishing between the defects of the dementia precox disorder and a possible added organic defect

Of all of our patients who received electric shock treatment from April 1941 to the end of 1945 there were 129 cases of dementia precox It has not been possible thus to make a desired detailed study and report of these cases and the results with respect to duration before treatment type of clinical reaction amount of treatment, etc, but we can say that

as of December 31 1946 55 per cent of these patients had been able to return home 60 per cent of 68 patients treated in 1944 and 1945 were at home and making a good adjustment We feel that patients treated in later years are showing better results The increased experience in treatment and general management contributes to this It should be emphasized that understanding the patient and choosing the proper time for treatment are important factors By proper time we mean that period when the patient shows some willingness to face his or her responsibilities and not when the patient is going through an uncontrolled uninhibited escape from all reality

Electric shock therapy to help carry patients safely through episodes of acute suicidal impulses has been very useful Acutely excited patients who seemed threatened with death from exhaustion reacted promptly to electric shock when 2 treatments daily were given Such patients who were unable to retain tube feedings and showed no improvement with hydrotherapy and sedation became quieter after several treatments and ate and slept sufficiently Electric shock treatment appears to shorten the duration of the excited disturbed phase of mental disorder

During the several years of our treatment of patients by the various shock methods no death occurred which could be attributed directly or indirectly to any of these methods As we have indicated in the description of the use of metrazol proper management of the patients in convulsions materially reduced fractures and dislocations However these occasionally occurred particularly when because of physical peculiarities the spines of patients could not be hyperextended The convulsions produced by electric shock are in our opinion equal to if not more severe than those produced by metrazol The severity of a convulsion tended to produce muscle strains even if fractures did not occur and it was felt that electric shock was contraindicated in elderly persons and others who might be considered to be disposed to fracture of bones

Bennett of Omaha is to be credited with the introduction of the use of curare for the softening of the convulsions produced by electric shock or metrazol Curare paralyzes the neuromuscular junctions and renders the muscles therefore less subject to contraction In recent years a special preparation intocostrin or more recently d tubocurarine *has been used extensively In a dosage of approximately 1 mgm per* kilo of body weight the drug is injected intravenously at a very slow rate immediately before the electric shock is administered The desired effect is shown by inability of the patient to raise his head At the same

time the drug inhibits thoracic breathing and causes therefore, some distress However the beneficial effects of reduction of strain on muscles and bones outweight the possible distressing effects An antidote to curare is prostigmine, 1 c c of 1-2 000 solution, which may be given subcutaneously prior to the application of electrodes or immediately after the shock In our experience any method of artificial respiration usually will carry the patient safely through the period of temporary apnoea A resuscitator is always at hand in the treatment room but its use rarely has been needed

By the use of curare older patients and those with arthritis or fixed spines may be given electric shock without complications Our oldest patient treated with electric shock by the assistance of curare was a man of 82 with a recurrent agitated depression Before coming to the hospital he had fractured his right acetabulum in a fall In his agitation he was making life miserable not only for himself and his family but for others who came in contact with him He was given four electric shock treatments modified by curare and he almost immediately showed improvement Four weeks after treatment he returned home evidently recovered He showed no evidence of physical injury from the treatment Curare has been used preceding treatment in an increasing number of patients and during 1945 in all of the women patients except 4 These women were markedly excited and resistive, and one of them sustained a fracture of a dorsal vertebrae We have noted that dementia precox patients seem to show much less distress with respect to the difficulty in breathing caused by curare than do other patients who are depressed and agitated It is to be noted also that during the post convulsive phase mute or stuporous dementia precox patients are less apt to show extensive automatic movements and restlessness than the other patients

Chronic dementia precox patients not infrequently show very marked almost immediate benefit from electric shock treatment so that previously disturbed disorganized patients may become orderly sociable and well conducted Some of these patients however, seem to be unable to maintain this contact with reality or are unwilling to do so then shortly slip back into the previously disorganized thinking and behavior We recall one such woman who had been ill for at least 6 years without signs of improvement With electric shock treatment repeated three times she showed the above mentioned temporary improvement to the point where she could play bridge satisfactorily with

comparatively normal patients and showed a reasonable amount of insight Each time however she regressed to her former state and for the past several years she has continued to show no evidence of improvement

Opinions About Efficacy of Shock Therapy—In order to determine whether there might be a consensus of opinion regarding the shock treatment of dementia precox particularly with reference to the efficacy of insulin metrazol or electric shock a group of medical directors or representative hospitals in various parts of the country were communicated with and asked for their opinions Pertinent comments from the replies received are presented herewith in alphabetical order in instances where the directors were willing to be quoted

Dr Clarence H Bellinger Director Brooklyn State Hospital in reply to our inquiry pointed out that approximately 7 000 patients had received shock treatment at that hospital and says In my opinion deep insulin shock therapy is the treatment of choice in cases of schizophrenia of less than two years duration When patients are very actively disturbed I believe that metrazol may be combined with insulin for a few treatments as it tends to quiet the patients and make them more amenable to care on the insulin service Remissions in patients with schizophrenia who have had insulin shock therapy are unquestionably more complete and more lasting than those obtained with other forms of shock therapy In those cases which do not respond to insulin shock treatment and particularly those cases where the disease has continued for more than two years we find metrazol of definite value as approximately 40 per cent of these patients improve sufficiently to leave the hospital In my opinion ambulatory insulin is of little value and its administration in the offices of some practitioners has been without benefit to the patient and without credit to the medical profession

As to the treatment of cases of schizophrenia with electric shock therapy remissions may be brought about but it is our experience that the remissions are neither as complete nor as lasting as those with the other types of shock therapy

Dr Earl D Bond Medical Director of the Institute of the Pennsylvania Hospital who as previously noted had carried out with his associates a ten year period of treatment of dementia precox with insulin says I believe that insulin shock is far to be preferred over electric shock in the treatment of schizophrenia But insulin must be used to produce repeated deep stupors and this means the full time of expe

rienced physicians and nurses in a well ordered unit Insulin produces best results in patients where the overt symptoms have lasted less than two years, occasional good results in chronic patients, almost no results in patients under 17 years of age Many patients make surprisingly good improvement and then relapse Insulin is not a complete answer, but it is a valuable one It should be led up to, combined with and followed by psychotherapy'

Dr Karl M Bowman Medical Superintendent of the Langley Porter Clinic San Francisco replied that Insulin is the best treatment we have for dementia precox In cases that do not respond well we add electric shock but contrary to the practice of most persons we do not give the electric shock when the patient is in coma but in the afternoon We feel this obviates some of the dangers and have found it more satisfactory Our standard treatment is 50 comas

"We have practically discarded the use of metrazol, but have used it in rare cases We regard insulin as of little value in any of the other conditions although it may help put on weight and have a slight quiet ing effect on many cases of various types'

Dr Franklin G Ebaugh, Director of the Colorado Psychopathic Hospital forwarded with his reply a paper on insulin therapy written by Dr Veit one of his associates Among the conclusions were the following Schizophrenic reactions constitute numerically the largest group of annual admissions Approximately one-third of all schizo phrenic reactions admitted to the Colorado Psychopathic Hospital the past three years received insulin therapy Seventy eight per cent of the 158 schizophrenic reactions so treated achieved the ability to leave the hospital The best results obtained in sequence were catatonic mixed and paranoid types Combined insulin convulsive therapy indic ative of present day psychiatric trends occurred in 40 cases Age alone is no contraindication to insulin shock therapy Psychothrapy with its emotional connotations may function physiologically on the same basis as insulin

Dr Ebaugh himself states You can also quote me as saying I have been disturbed for many years by the abuse of shock therapy including insulin The development of these therapies has frequently interfered with resident training schedules They are empirical, and definitive psychotherapy is lost by giving it in all cases Likewise the evaluation of group therapy and all the adjunctive therapies play an important role in the results obtained Over a three year period at least 50 per cent

of all our insulin cases have recurred and the statistics from this clinic now indicate that the recurrence rate is much less in those cases that have received comprehensive psychotherapy following insulin

Dr Christopher Fletcher Senior Director of the Buffalo (New York) State Hospital submitted a table which showed that at the hospital 318 dementia precox patients had received insulin treatment up to August, 1943 when it had been discontinued Of these patients 7 per cent were reported as recovered and 51 per cent much improved or improved 51 per cent of the patients were paroled or discharged during the year of treatment On the other hand 89 dementia precox patients had received electric shock treatment Of these 11 per cent were considered recovered and 50 per cent much improved or improved 47 per cent of these patients had been paroled or discharged during the year of treatment

Dr Fletcher regarding this report says "You will note that as far as recoveries much improved and improved are concerned electric shock treatment has a slight advantage over insulin shock Considering the percentage of patients paroled or discharged the figure is 51 per cent for insulin shock and 47 per cent for electric shock Theoretically these figures should have been reversed to be consistent with the percentages of recoveries and improvements I can offer no explanation for this slight variation these are the figures just as they appear in our annual reports With reference to metrazol shock therapy during the fiscal year ending June 30 1939 we treated 50 cases of dementia precox but it was the consensus of opinion of our staff that the insulin shock treatment gave as good or better results with decidedly less complications We had some unfortunate experiences with metrazol particularly in the matter of fractures and dislocations We discarded the metrazol treatment in 1939 We also tried a combination of metrazol and insulin but found it was not worthwhile

Dr Nolan D C Lewis Director of the New York State Psychiatric Institute and Hospital presented a compilation of facts which he said represented the consensus of opinion of his staff Among these were the following opinions The treatment of choice for schizophrenia is deep insulin coma Combined shock therapy is used in cases which show no improvement with insulin alone after 35 comas electric shock being used three times a week in the middle of the coma Metrazol may be used in the same manner Electric shock therapy with the general treatment of schizophrenia is disappointing Some cases of schizophrenia

respond if they are acute cases first attacks acute catatonics or paranoids or have excitement and confusion with affective coloring

Other schizophrenics show no improvement generally and those who do, relapse rapidly Metrazol shock therapy has been displaced because of too many complications but occasionally may be used with insulin where electric shock and insulin have failed

With insulin shock therapy Lewis hospital cases showed about 51 per cent in the much improved and remission states Relapses occur early usually within 60 to 90 days and average about 17 per cent With combined therapy an additional 6 per cent to 8 per cent of the failures develop remissions

Dr John A Pritchard Director of the St Lawrence State Hospital (St Lawrence, New York) presented a table of insulin treated cases showing that with respect to the whole group 23 per cent were recovered or much improved and 31 per cent were out of the hospital With 155 cases treated by electric shock 29 per cent were recovered or much improved and 44 per cent were out of the hospital Dr Pritchard states You will note from these tables that we feel that we had somewhat better results with electric shock than with insulin'

Dr Arthur H Ruggles Superintendent of the Butler Hospital of Rhode Island replied In my opinion metrazol shock therapy does not offer advantages over electric shock therapy that compensate for its discomfort to patients and so has been discarded by us in favor of electric shock therapy In my opinion insulin shock therapy is at the present time the treatment of choice for dementia precox In my opinion also electro-shock therapy while temporarily improving some cases of dementia precox so that they can be gotten out of the hospital is not permanently effective except in very few cases and so should not be regarded at the present time as successful in the cure of dementia precox'

Dr Harry C Solomon Medical Director of the Boston Psychopathic Hospital replied as follows 'In patients who have been hospitalized for more than 2 years with a diagnosis of dementia precox it appears that chances of recovery with electric shock are rather less than if nothing is done certainly it is no better On the other hand electric shock sometimes is quite effective as a symptomatic treatment Thus, if a patient goes into a state of great excitement or mutism or refusal of food etc electric shock may solve the problem In the earlier period of schizophrenic psychosis electric shock therapy again has great value

for certain symptomatic problems Its value for long term therapy is however quite another problem It is my opinion that as a therapeutic process for cure of schizophrenia it has very little value However there are a certain number of acute cases with a good deal of emotional reaction which presumably would recover from the attack within a few months for whom electric shock is a method for reducing the time of illness much as in the manic depressive cases It also in my opinion has a very great value in making certain patients accessible I refer to the type of patient who is evasive completely repressed and unwilling to talk over his problems In some cases of this sort it is much more effective than sodium amytal or sodium pentothal in that it leads to the patient opening up becoming friendly willing to discuss his problems with this state lasting after treatment for several days or longer in contrast to the short period that is produced by the barbiturates

I believe it has a place in conjunction with insulin in the treatment of schizophrenia

It is my opinion that insulin therapy has a certain degree of benefit in relatively early stages of schizophrenia

My working rule of thumb is something like this There is a certain group of schizophrenic patients who are going to make a good improvement within the first few months after hospitalization There is a certain other group who have a good recovery potential but not sufficient to carry them over to a reasonable recovery It is these two groups for which insulin therapy offers some benefit

In the first group perhaps the time of the psychosis is shortened and I believe there is some probability that the likelihood of relapse is less

In the second group insulin especially combined with convulsive shock may make the difference between chronicity and recovery Again to emphasize this is a group in which the patient has almost sufficient capacity for recovery but not quite enough insulin does give the necessary boost

—how far these methods are preliminary to successful psychotherapy is an interesting and I believe moot question

Dr M A Tarumianz of the Delaware State Hospital states that for acute schizophrenic cases electro shock treatment has become the method of choice for a variety of reasons The application is simple and does not necessitate a large staff of helpers and supervisors which is not available in public institutions at this time Furthermore the de

respond if they are acute cases, first attacks, acute catatonics or paranoids or have excitement and confusion with affective coloring

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controlling factor in any considerable or permanent reversal of the clinical symptoms The use of metrazol has been discontinued In some instances and in some types of dementia precox showing affective components, in the early paranoid reaction types and in the catatonic types we have found electric shock often reverses the symptoms quite satisfactorily at least temporarily" Dr Tillotson reports also the use of electric shock daily *for a period of 2 or 3 weeks* then about one shock every other day With late schizophrenia patients of the paranoid and mixed types some *good* results have been obtained

Dr S Bernard Wortis Director of the Psychiatric Division Bellevue Hospital writes in reply My own impressions have been that it is much more useful for acute paranoidal and acute catatonic reactions where the *person* can be brought *out* much more quickly

At Bellevue we no longer use metrazol but do use electric shock treatment with these reactions *Also* some few cases of schizophrenia of the simple and hebephrenic type may possibly be helped by prolonged insulin *therapy* although I am *not at* all certain it modifies the underlying personality structure Also we have seen *patients* who have not reacted to insulin and do react to electric shock and some instances where the reverse *is true*

On the whole I would say these are certainly useful adjuncts in the treatment of certain types of schizophrenic reactions but *do* not change the fundamental personality constellation

Dr John C Whitehorn Director of the Henry Phipps Psychiatric Clinic Johns Hopkins Hospital Baltimore replies that he may be quoted as saying

For the quieter institutional management of symptoms of depression or excitement in schizophrenic patients electro convulsive treatments have had a limited usefulness Insulin coma or even sub shock insulin treatments have a particular value in early schizophrenic reactions probably in large part *because* they help to *cultivate* mutual interest and rapport in an acceptable pattern of dependency between the *patient* and the therapeutic team The insulin treatment serves this purpose better than the electro convulsive treatment Out of such experiences strategically used for psychotherapy schizophrenic patients may achieve a better adjustment in life than they had before the psychosis occurred

The senior director of one of the large New York state hospitals who prefers not to be quoted or identified states that he believes that

fects of memory as they are often produced by electro-shock therapy have a psychological advantage because the patient gets away from some of his delusions and hallucinations

Insulin treatments while generally not superior to electro-shock seem to have specific value for people in the age group between 18 and 30 We have had some cases especially with catatonic and paranoid symptomatology which have reacted more favorably under insulin treatment than electro shock treatment

There is not much difference between metrazol and electro shock except that patients have a strong dislike for the treatment Furthermore the convulsions are often more violent and the patient appears more exhausted physically "

With respect to chronic cases Dr Tarumianz says, "Cases with a prolonged history of a schizophrenic psychosis are generally not substantially influenced by any of the shock therapies This does not mean however, that shock therapy has no benefit in these cases While very few cases will show a permanent improvement, many of them improve temporarily to the extent of better hospital adjustment

In our experience acute excitement states and paranoid hebephrenic and especially catatonic cases can be promptly influenced by intensive shock therapy given as frequently as two or three times a day This method is often far superior to sedation or hydrotherapy In some of the disturbed cases metrazol treatments have proved to be superior to electro shock therapy It is our impression that this can be explained on psychological grounds rather than physiological ones Most patients no matter how disorganized dread the treatment, and this psychological effect is favorable in the management of these cases

Regarding a total evaluation Dr Tarumianz states "A symptomatic improvement can be noted in over 50 per cent of all cases be they acute or chronic A permanent improvement is almost exclusively seen in acute cases However the number of such cases is small and probably in the neighborhood of from 10 per cent to 0 per cent Electro shock treatment has emerged as the treatment of choice However, metrazol and insulin are of value in certain types of cases

Dr Kenneth J Tillotson Psychiatrist-in Chief, McLean Hospital Waverley Massachusetts, indicates that the results in dementia praecox depend first of all on the duration of the clinical symptoms He seems to prefer the use of insulin combined with the use of electric shock The amount or degree of deterioration already evidenced may be the

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one of the methods the patients fundamental personalities are permanently altered It is thus not surprising that not a few apparently recovered patients relapse within periods of months or years In such instances shock treatment should not be charged with failure Relapses may be due to the fact that these abnormal personalities have been exposed again to the same stresses and strains which were factors in the precipitation of the original illness The avoidance of such stresses and strains after patients leave the hospital seems to be indicated as the obvious aim toward preventing relapses It is likewise obvious of course that such circumstances cannot always be avoided and it may be expected therefore that dementia precox patients will continue to break down and return to hospitals The use of insulin or electric shock as a method of treatment seems to be one of individual preference The fact that electric shock is more expeditious is not of course a reason for using it to the exclusion of insulin if the latter is more efficacious However there are and there probably will continue to be many situations in and out of hospitals where the necessary facilities and personnel are not available to use insulin shock as a treatment method In such situations it would be unfortunate if patients were deprived of the available electric shock treatment even if it might not be considered as efficacious as insulin shock We believe that some form of shock treatment should be considered for every dementia precox patient particularly in the early period of the illness It should not be looked upon as a method of last resort as some physicians seem to view it Statistics repeatedly show that the best results are obtained with patients who have had shortest duration of the symptomatology of dementia precox We should like to emphasize our feeling that any method of shock treatment is only one part of a desirable psychiatric treatment and that in a hospital all the best available methods of psychotherapy socialization physical education and occupational therapy should be utilized in connection with shock treatment

Prefrontal Lobotomy

From time to time reports in the literature have shown that man can exist fairly efficiently even if he has been deprived of the function of his frontal lobes by accidental injury operation or some other process Reports by Ackerly and Brickner of such cases are valuable contribu

insulin therapy is the treatment of choice in dementia precox He states that for the past 2 years an insulin therapy unit was maintained for male patients, but that because of the shortage of staff it was not possible to provide this treatment for female patients, who had electric shock In the director's opinion the patients, who were treated with shock, did not show as high recovery or improvement rate and there was a greater tendency to relapses

Another director of a New York State hospital, who prefers not to be quoted or identified reports that at that hospital 169 patients have received insulin shock treatment One hundred patients were treated with metrazol 135 were treated with combined insulin shock and metrazol and 71 patients received electric shock treatment As a result of their experience this hospital believes that the insulin shock method gives the best results of all the shock therapies and is to be preferred in the treatment of dementia precox

The acting director of one of the large New York state hospitals in summarizing the opinions of the majority of the staff states that insulin shock treatment almost certainly hastens remissions in favorable cases but that the treatment probably has little or no effect on the outcome in later years It however, makes the patient more accessible to psychotherapy and to other methods of attacking the psychosis With respect to electric shock it was thought that this treatment may hasten the remissions in favorable cases but it was quite doubtful whether it increases the number of remissions materially Recently large numbers of chronic cases have been treated with electric shock and whereas no full remissions had been expected or attained a substantial number of most disturbed patients have shown sufficient improvement in behaviour to justify treatment of such cases

Summary —As a result of our personal experience with the various forms of shock therapy in dementia precox and the reports of others concerning these methods it seems reasonable to conclude that although their use is empirical, they have contributed materially to the welfare and benefit of persons suffering from dementia precox Even if one does not conclude that any one of the methods is a specific form of treatment or that it in itself brings about recovery of patients any one of the methods seems to have a possibility of shortening the illness and particularly the hospitalization of patients possibly largely through making them more cooperative in the use of other psychiatric hospital adjuncts and more susceptible to psychotherapy It does not appear that by any

gains were more obvious One remained in the hospital but she had been raised from a very unsatisfactory level of behavior to one of interesting activities The second woman was able to live outside the hospital without a nurse resuming her former social contacts The third woman apparently was free from symptoms had married and had a baby Streeker adds The outstanding clinical result was the disappearance in very large degree to destructive and dangerous clashes with the environment In two patients former disregard of others had been replaced by manifestations of thoughtfulness consideration and generosity '

Dr Francis C Grant the surgeon who operated upon the cases reported by Streeker and Palmer commenting on the results of the procedure said Briefly the effect of surgical section of the frontal association tracts can be summed up in the phrase relief of apprehension If the mental condition is produced or aggravated by fear then this factor in the patient's mental reaction can be eliminated by prefrontal lobotomy

Dr M A Tarumianz discussing the paper of Dr Streeker and his associates reported favorable results at the Delaware State Hospital citing particularly the case of one man who after 2 years of hospital residence with evident deterioration responded quickly to prefrontal lobotomy and two years after the operation was conducting his business and appeared generally normal

Streeker indicated that the constellation of symptoms of fear anxiety acute mental suffering aggressive violence etc is a better criterion of anticipated improvement from the operation than the diagnostic label

Van Wagenen *of the University of Michigan confirmed Streeker's* conclusions regarding the criterion of anticipated improvement and stated Where the disturbance of emotions falls largely in the fear awe rage anger group the results have been extremely gratifying Where the disturbance of emotions is largely one of pleasure reports have been rather disappointing

Petersen and Buchstein reported in 194 that they had performed since January 1941 prefrontal lobotomy on 46 patients in the Willmar State Hospital all of the patients suffering from psychoses of long standing Psychic tension was the criterion used in the selection of the subjects for the operation Thirty six of the patients were diagnosed as cases of dementia precox There was no operative mortality One

tions to a full knowledge of the functions of the frontal lobes Presumably somewhat similar effects might be expected if the association pathways between the frontal lobes and thalamus were sectioned

In 1935 Egas Moniz, a Portuguese neurologist and Almeda Lima, a surgeon in cooperation with a psychiatrist, Sobral Cid, undertook the treatment of psychotic patients by surgical interruption of the frontal association pathways in the brain They performed their first operation on November 12, 1935 The favorable result, with confirmation, was reported immediately in several brief communications, and a monograph by Moniz describing the results of this operation in 20 cases appeared in June 1936

Walter Freeman and James W Watts of Washington D C were impressed by this report, and on September 14, 1936, they performed the first prefrontal lobotomy in this country Following their favorable report the method was soon taken up by others, and a large number of such operations have been performed by various surgeons cooperating with psychiatrists in this country Ziegler, 1943, surveyed the results up to that time of over 600 lobotomies The outcome was reported but the cases were not classified according to the preoperative clinical condition nor diagnostic grouping For our immediate purpose, that is the use of this method for the treatment of dementia precox, Ziegler's material is not applicable The clinical material reported by Freeman and Watts was made up largely of patients with affective disorders, that is, depressions with agitation and psychoneuroses with anxiety, agitation and obsessive compulsive trends Strecker, Palmer and Grant reported in 1941, however the results of lobotomy in 5 chronic dementia precox cases, each of whom had a long duration of psychosis with previous intensive efforts including insulin shock and convulsive shock treatment These patients had been observed between one and two and one half years after operation Strecker indicated that the "group was distinguished by the fact that the psychotic life was not on an inactive level but tended to be stormy and violent, with vivid hallucinatory experiences motivating apprehension and severe panic reactions of sufficient intensity to induce suicidal attempts, self mutilation destructive aggressive and homicidal impacts, restlessness, irritability noisy excitability, refusal of food unwillingness to tolerate clothing etc" All the patients improved one man became less violent and destructive and conformed more to institutional regime and about the same result was obtained in one woman In the 3 remaining women, however, the

duced an aggravation of her symptoms she was more restless agitated and combative than before and months following the treatment had suffered from repeated epileptic form of convulsions In a summary of their experience the authors conclude that frontal leucotomy is not recommended as a therapeutic procedure in chronic schizophrenia Of the post operative care given these patients we are given no details in the authors' communication One wonders whether the intensive nursing care and re education emphasized by others was included in the treatment and if not whether this possibly may have been a factor in the lack of improvement It appears that patients who are subjected to this operation should not be left to shift for themselves

In 1945 Freeman reported that of over 50 schizophrenics who had been observed over a period of from 2 to 7 years following prefrontal lobotomy slightly more than half of the patients were usefully occupied and less than one in 5 was institutionalized He emphasized the improvement in disturbed combative patients and stated in services where prefrontal lobotomy has been carried out on any considerable scale the problem of the disturbed schizophrenic has been all but solved Dr Solomon Director Boston Psychiatric Hospital and Dr Tillotson Medical Director of the McLean Hospital both indicate in a personal communication that when various methods of shock treatment have failed to be effective and the patient goes into a state of chronicity then lobotomy can be considered as a method of last resort with great benefit in some cases Statistical details are not available from these sources at present writing

From these reports and others in literature it would appear that prefrontal lobotomy may be another valuable method for the treatment of dementia praecox particularly for patients who have failed to respond to other methods of treatment and who show continuous agitation distress disturbance and combativeness with or without hallucinatory episodes It is not to be expected that through such an operative procedure patients will be restored to their previous normal personalities and activities occasionally such results may occur but if the patients can be freed from distress and disturbed behavior and can spend their lives under supervision in their homes or comfortably in an institution the operation should be considered as being justified

patient died eleven days after the operation from choking on food Petersen and Buchstein report that relief from tension anxiety and worry is a most striking phenomenon A complete relaxation is noted immediately after the cutting of the second side The tense and pinched expression disappears and the individual looks years younger When consciousness returns anxiety and worry usually are gone The old complaints may be recited for a time but in a matter of fact way The emotional component is lacking In time the complaints themselves are forgotten' Petersen and Buchstein report that of the dementia precox patients one made a social adjustment, 12 were markedly improved and 11 slightly improved

Freeman emphasizes particularly the need of re education of the post-operative patient and points out that there may exist a transitory state of apathy indolence and inertia with blank facial expression The patients may have to be fed and they take no responsibility for the control of the bowels and the bladder Others are more active play like children in an aimless way Some become restless talking loudly and obscenely and carrying on hilarious conversations Patients require intensive nursing care in the re-education of the control of the bowels and the bladder and in eating Patients may have so much inertia that when they eat they will not swallow the food The death reported from Willmar was due to this and another patient in this series was cyanotic before the food was removed from his throat Efforts must be made to overcome inertia and the directions often repeated It seems to be agreed that the eventual result of the lobotomy may not be evident in less than a year after the operation

In contrast to these reports of the favorable results of prefrontal lobotomy in dementia precox Heilbrunn and Hletko report disappointing results in 10 cases of dementia precox whose psychotic symptoms often associated with incorrigible untidiness had prevailed from 6 to 32 years The youngest patient was 26 the oldest 49 years of age, the average age was 35 years Details regarding the individual cases are not presented in report Under results Heilbrunn and Hletko report that death occurred in two cases one from severe bronchial pneumonia and the other from large hemorrhage in right frontal lobe At the time of the report the average period of nine months had elapsed since the operation and up to date only 2 patients have shown some amelioration of their conditions No improvement whatever could be seen in any of the other patients In one patient the operation was said to have pro

duced an aggravation of her symptoms; she was more restless, agitated and combative than before and 2 months following the treatment had suffered from repeated epileptic form of convulsions. In a summary of their experience the authors conclude that "frontal leucotomy is not recommended as a therapeutic procedure in chronic schizophrenia." Of the post operative care given these patients we are given no details in the authors' communication. One wonders whether the intensive nursing care and re-education emphasized by others was included in the treatment and if not, whether this possibly may have been a factor in the lack of improvement. It appears that patients who are subjected to this operation should not be left to shift for themselves.

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From these reports and others in literature it would appear that prefrontal lobotomy may be another valuable method for the treatment of dementia precox, particularly for patients who have failed to respond to other methods of treatment and who show continuous agitation, distress, disturbance and combativeness with or without hallucinatory episodes. It is not to be expected that through such an operative procedure patients will be restored to their previous normal personalities and activities; occasionally such results may occur, but if the patients can be freed from distress and disturbed behavior and can spend their lives under supervision in their homes or comfortably in an institution, the operation should be considered as being justified.

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Chapter IX

THE AFFECTIVE REACTION TYPE (MANIC-DEPRESSIVE) INCLUDING INVOLUTIONAL MELANCHOLIA

By D K HENDERSON

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whose admirable papers on melancholia I am greatly indebted quotes a passage from Aretæus which indicates that Aretæus had a good idea regarding the relative merits of physiological and psychological causation e g If it (black bile) be determined upwards to the stomach and diaphragm it forms melancholy for it produces flatulence and eructations of a fetid and fishy nature and it sends rumbling wind downwards and disturbs the understanding On this account in former days these were called *melancholic and flatulent persons* And yet in certain of these cases there is neither flatulence nor black bile but mere anger and grief and sad dejection of mind In contrast to the melancholic or depressed state Farrar has drawn attention to the emphasis laid by Aretæus on the sharpened senses the trenchant wit the phenomenal memory and the unexpected mental qualities which suddenly develop in states of mild maniacal excitement so that certain individuals so affected may be the exponents of untaught astronomy spontaneous philosophy poetry truly from the Muses

Jelliffe in a paper on Some Historical Phases of the Manic Depressive Synthesis is inclined to criticise Farrar for alleging that the Kraepelinian formulation of mania and melancholia being phases of the same disease entity rather than separate diseases was *foreshadowed* by Aretæus but a critical examination of the writings of Aretæus as quoted by Jelliffe himself indicates that Aretæus had a very clear knowledge of what he was writing about and over and over again he shows how one state may be the forerunner of or dovetail into the other At any rate when Aretæus came so near it is a sad reflection on human perspicacity to think that we had to wait until 1896 before the unity of mania and melancholia was fully recognised How near Aretæus came may be gauged from the following Melancholia is a sadness of the mind in which the patient broods over a certain subject it is without fever melancholia is commonly the beginning of mania They differ however in that the character of the disturbance the wildness is always the same in mania but in melancholia we have at times the fear of poisoning at times misanthropy then again religious superstition inclination to suicide and the like as characteristics The above passage is quite admirable in that it draws attention to the preceding depressive stage to mania which we so generally recognise to-day while at the same time a true contrast is drawn between the more uniform manic phase compared with the diversity of symptomatology in the depressive one At another point we find the following observations The following are some of the more evident marks of melancholia the patients are quiet or sad dejected and dull without reason melancholy too begins when it is impossible to assign a cause besides they are passionate ill natured wakeful and raised out of their sleep in great confusion great terror likewise seizes them if the disease increases at which times their dreams are frightful clear and wearing

AFFECTIVE STATES

Historical

The conception delimitation and even prognostic significance of the varying affective states characterising the manic depressive group of mental disorders is due to the clinical brilliance of Kraepelin who in 1896 emancipated the manic depressive psychosis from the other acute psychoses Kraepelin's formulations marked an epoch in the history of psychiatry which have stood the test of time They added zest to psychiatric work by stimulating thought and by introducing a degree of certainty which formerly had been based more on impression than on a careful evaluation of striking clinical signs and symptoms An analysis of Kraepelin's views will be given at a later point in this article but his name has been placed in the fore front as a tribute to a great psychiatrist and teacher

Happiness and joy and the contrasting states of grief and sorrow are affective disturbances which every normal person experiences in some degree It is only when such states are out of keeping with the individual s actual circumstances and surroundings that they become pathological or morbid and are designated mania and melancholia Mania and melancholia have been recognised from time immemorial, either or both being almost the paradigm of insanity in general In any case, the earliest attempts to describe and classify mental disorders invariably centered round those obviously disordered and strongly contrasting emotional conditions Farrar in a series of most interesting and instructive historical papers, termed "*Some Origins in Psychiatry* , has described the Hippocratic period which extended to the second century A D as one during which man formed the habit of observing enquiring, proving' It was at that time that mania and melancholia were described and named the former as a state of excitement and violence, the latter one of anxiety, fear and seclusiveness These, of course, were the bare rough outlines of a structure which is still far from being completed

Aretæus of Cappadocia in 80 A D gave the following description of melancholia "It is a lowness of spirits from a fixed and single phantasy without fever, and it appears to me that melancholia is the commencement and a part of mania For, in those who are mad, the understanding is turned sometimes to anger and sometimes to joy but in the melancholias to sorrow and despondency only ' He did not fail to note that transitions or alternations occurred from one state to the other and specifically mentioned that if fever were present, some other name e g phrenitis, should be employed He likewise drew a distinction between the affective states and those conditions characterized by the 'mental wanderings which are the calamity of advanced age" Lewis to

clear recognition of the alternation and transition of states of mania and melancholia but if someone should demand even clearer proof he may be referred to the *Observations* of Haslam who was the distinguished apothecary to Bethlem Hospital As the terms mania and melancholia are in general use and serve to distinguish the forms under which insanity is exhibited there can be no objection to retaining them but I would strongly oppose their being considered as opposite diseases In both the association of ideas is equally incorrect and they appear to differ only from the different passions which accompany them (quoted from Lewis)

During the nineteenth century many writers in various countries substantiated and added to the concept of mania and melancholia being phases of one disorder, but it will be sufficient for our present purpose to refer to the writings of one of the most distinguished Griesinger Griesinger s book on mental disorders is still a mine of knowledge and well worth reading e g Sometimes volition is directly diminished and weakened at other times it is convulsively restricted (absence of energy and will) At others there appear certain desires and impulses of will to which material and object are afforded by the morbid mind or lastly a high degree of moral pain excites various impulses of an aimless convulsive character which manifest themselves in extreme restlessness the continuance and increase of which cause these forms of melancholia to assume a different character and to pass into quite another variety that of mania At another point Observation shows that the immense majority of mental diseases commence with a state of profound emotional perversion of a depressing and sorrowful character Griesinger gives the credit of the above observation to the Belgian psychiatrist Guislain and then adds Of its general correctness there is no doubt and we can have no hesitation in speaking of the stadium melancholicum as the initiatory period of mental disease In the following sentence he hints at the prognosis in certain types and probably has in mind those involutional melancholic states accompanied by organic brain changes We have already seen that melancholia not infrequently passes into one of the forms of mania but further simple melancholia or melancholia with stupor may also terminate by leaving the patient in a state of intellectual weakness a more or less exaggerated state of veritable dementia This is probably owing to the development of organic alterations within the cranium

In passing it may be mentioned that Griesinger has many interesting observations to make on the problem of suicide which is such an important factor in all states of depression and which will be dealt with later in the course of this discussion

A few years later in 1851 J P Falret in his lectures at the Salpetriere introduced the use of the term folie circulaire which he described as follows

an appearance of truth, whatever they pursue with ardour is easily repented of" Such patients shun society, complain of trivial things, curse life and covet death, have a depressed facies and look ill nourished In contrast, here is the manic picture "Mania is a continuous disorder of the mind without fever If fever accompanies the disturbance, it does not, in reality, belong to this disease, but is the outgrowth of some accidental cause Neither is delirium arising from the taking of specific substances, as wine, hyoscyamus and the like deserving the designation of mania, for such disturbances occur quickly and disappear just as quickly Insanity of old age has no intervals of quiescence and is incurable, whereas mania has intermittent periods and is curable" The symptoms of the condition are noted in detail and then occurs a very significant sentence viz If there is a remission of the disease, the patients become quiet and depressed, because they are now conscious of their affliction

The above extracts bear witness to the clinical acumen of Aretæus and stand comparison with the best clinical descriptions of to day He may not have used the terms mania and melancholia with the connotation they have now, but he missed very little regarding cause, course and outcome He recognised their constitutional origin, the absence, frequently, of any adequate cause, that they were unaccompanied by fever, that, in fact, they could be differentiated from febrile states, that they alternated one with the other, that they were curable that they acquired insight while in their depressive phase Without quibbling or hair splitting the palm may be well awarded to Aretæus

It is a pity as has been said that the keen observations of this great physician of the Hippocratic period were not more fully supported Indeed during the next fifteen hundred years a regression rather than an advance occurred There was a return to supernatural beliefs and practices, superstition was in the ascendant, the exorcisms of the priest were in more favour than the scientific outlook and practice of the physician The sixteenth century witnessed the re awakening of orthodox medicine and is associated with the names of Paracelsus Weyer and Platter It is not however, until we come to the time of the English physician, Thomas Willis (1622–1670), described as "the father of modern cerebral physiology", that we have a further approach to the unification of mania and melancholia He wrote "After melancholia, we have to treat of mania which has so many relations to the former that the two disorders often follow each other the former changing into the other and inversely The melancholic diathesis indeed, carried to its highest degree causes frenzy and frenzy subsiding changes frequently into melancholia (atrabiliar diathesis) These two disorders like fire and smoke often mask and replace each other and if we may say that in melancholia the brain and animal spirit are obscured by smoke and black darkness mania may be compared to a great fire destined to disperse and to illuminate it" The above dramatic description indicates a

'I am waking I am quite suddenly wide awake and springing out of bed More suddenly than I have done for ages This is strange because I have been badly run-down lately owing to over work and anxiety and it has been a daily torment this business of tearing myself out of bed My razor is fine this morning and shaving is only a matter of a few minute instead of a quarter of an hour of scratching and relathering and restropping and cursing I am splashing about in the bath the water is almost cold but I don t mind a bit It makes me sing I am singing Rule Britannia It is a wonderful bath room song and it suits my voice admirably I am drying myself vigorously nd saying S-s-s as ostlers do when they are grooming their horses It is most invigorating The sun is pouring in at the open window What a morning'

I am dressed It was easy Everything was in its proper place stud links sock suspenders all of them I have had a good breakfast and am walking to the station I cannot remember ever walking to the station before but this morning I have loads of time I even have time to say Good morning to the ticket-collector instead of merely bumping him over in my dash for the train I am years younger I am well boisterously well by Jove and as happy as the King of Honolulu

Three Weeks Later

I am waking No I am not They can call me again I am annoyed I refuse to wake I am falling asleep I am fast asleep I am waking again someone is fussing me Oh all right all right all right' I am still waking but I am going to take my own time about it. I must wake I know I do I have crawled out of bed stretched myself and had a look round I feel horrible — rotten This is strange because I have been so jolly fit for the last few weeks and quite free from anxiety I am up now so I may as well get on especially as it is confoundedly late I am lying in a hot bath I know this i wasting time and that I shan t have time for breakfast but I don t care I have almost got a headache How disgusting I have had to shut the bath room window The sea-air is beastly cold in the early morning

I am dressed I don t look very nice but it has been such a rush and nothing was in its proper place There is no time for breakfast I knew there wouldn t be It doesn t matter I couldn t have eaten it anyhow I am driving to the station in the hotel bus The sun is shining Let it shine I don t care if it snows I am in the train In an hour and a half I shall be at the office Oh Heavens' The office For forty nine weeks I shall be at the office I feel weak and ill I believe I am going to cry No I mustn t do that I am yawning I am sleepy I am falling asleep I am asleep

The above description may be taken as an example of a more or less classical cyclothymic state a state which may never go beyond normal limits whereas the more severe types which tended to become set and protracted were termed

The transformation of mania into melancholia, and the reverse has been characterised for a long time as an accidental fact, but it has not been sufficiently noted, or at least it has not been expressly stated that there exists a certain category of the alienated in which this succession of mania and melancholia manifests itself with continuity and in a manner almost regular' (quoted from Jelliffe) He also made the observation that the individual phases of mania and melancholia were curable enough, but when they united themselves to form folie circulaire the outlook was bad indeed, because it was rare for either a complete cure or even a durable betterness to occur In 1854 Baillarger described his "folie à double forme, the conclusions of which as reported by Hack Tuke, are as follows 1 ' Besides monomania, melancholia and mania there exists a special form of insanity characterised by two regular periods one of depression and the other of excitement 2 This form of insanity (a) presents itself in isolated attacks, (b) reproduces itself in intermissions (c) the attacks may follow each other without interruption 3 The duration of the attacks varies from two days to one year 4 When the attacks are short the transition from the first to the second period takes place suddenly and generally during sleep It takes place slowly and gradually when the attacks are prolonged 5 In the latter case, the patients seem to enter into a state of convalescence at the end of the first period, but this return to health is incomplete after a fortnight, a month six weeks or more, the second period breaks out '

Falret contended that the type described by Baillarger was similar in every regard to his circular type and took occasion to observe that heredity was important in its production that it was more common in women, and that the prognosis was not favourable Jelliffe has recorded that Falret, father and son observed in three different families this form of mental disease in three different generations grandmother, mother and daughter all being affected in the same way an excellent example of similar heredity affecting ascendants and descendants The credit of describing milder forms goes to Falret, Junior He showed how the periodic swing in mood from grave to gay affects many people and yet never proceeds to the stage where treatment under mental hospital conditions is necessary That is to say that the vast majority are able to go about their business undisturbed and merely have times when they feel out of sorts or full of greater zest than at other times This observation was the precursor of the cyclothymic state which at a later date Kahlbaum described more specifically

An article unsigned which appeared in Punch on the 30th of August 1922, gives such a correct and withal amusing account of these contrasting cyclothymic states as to be worthy of incorporation in full The article is entitled *Going and Coming Back'* and is as follows

Furthermore Kraepelin considered that in the affective states cause course and outcome were so uniform and had so many points in common as to constitute a clinical entity He of course following the work of his pupil Dreyfus included involutional melancholic states in the manic-depressive group We now appreciate that manic or melancholic states may occur more or less at random and often one may proceed or follow the other It is true that cases of a recurrent nature occur which may exhibit only manic attacks but such cases are few and far between On the other hand it is not at all unusual for certain types of patient to have a series of recurrent depressive attacks without the exhibition of manic symptoms at any time We have still no sufficient explanation of why this should be so

There then is the situation as depicted by Kraepelin The manic-depressive or affective psychosis is a huge combination which at a future date may prove too unwieldy and become split into smaller entities which we shall understand more accurately and deal with more skilfully but Kraepelin himself was not unaware of this when he said It may well be that in the course of time a series of sub types will be made or even that certain small groups will be again separated entirely but if this happens it will as far as I can see certainly not be determined by those symptoms which are now commonly put into the foreground

The static formal perhaps somewhat rigid conceptions of Kraepelin have been supplemented not supplanted by the psycho-biological conceptions of Bleuler and Adolf Meyer each of whom concerned himself with the investigation of how under certain circumstances types of mental disorder occurred which might be characterised in all sorts of ways The various forms of mental disorder did not descend from the heavens in a chance way but the type exhibited could be correlated with the characteristics and emotional forces of the individual Such a formulation opened up a fascinating new field and produced a series of brilliant investigations which had for their purpose the estimation of the whole individual in terms of his integration and his adaptability to the constitutional forces in his nature and his environmental or accidental circumstances Once this situation can be worked out more thoroughly still we should develop a surer sense of prognosis diagnosis and treatment than is possible from an analysis of symptoms which often may be misleading Man s adaptive capacity under all circumstances should be the goal of our endeavour If we can solve that then we shall go a long way in our successful treatment of the psychoses Meyer is a splendid leader and I am going to prophesy that in the future his views will have a much greater vogue than even yet has been accorded to them His approach is brimful of common sense of which the following is a good example The full wholesome and complete reaction in any emergency or problem of activity is the final adjustment complete or incomplete but at any

vesania typica circularis" At a slightly later date, Hecker has the distinction of noting the absence of non-dementing factors.

And now after a considerable digression we return to Kraepelin who, more than any one had ever done previously succeeded in grouping the psychoses into manageable understandable entities and incidently gave the study of psychiatry an impetus which still continues. Kraepelin, in the successive editions of his magnificent text book, formulated and elaborated his ideas, and even although he may, with some justification, be considered as too arbitrary, didactic and all embracing, yet he created so great an interest that his observations became known the whole world over and were subjected to severe criticism and almost uniform praise. In more recent years his work is often referred to in a somewhat slighting manner as being purely descriptive and as contributing little or nothing to the understanding of the disorders which he described. That criticism may be true enough, but it does not detract in any way from the magnificent contribution which he made to psychiatric literature. He dealt with the facts as he saw them and refused to be side tracked into the interpretive field before he knew what he was actually dealing with. There are many who are returning to his point of view, who are hoping to be of greater assistance to their patients through a careful investigation of each individual case rather than by applying facile theoretical explanations, which are supposed to be common to every one.

According to Kraepelin the manic depressive group is inclusive of the so-called periodic and circular insanity, of simple mania, of the greater part of the morbid states termed melancholia, of cases of a "confusional" type, e.g. stupors, and of certain recurrent paranoid states such as the "querulants" described by Specht and Nietzsche, the periodic paranoics of Bleuler, the abortive paranoics of Friedmann and Gaupp. He reserved a place for the cyclothymics by stating that his formulation included these conditions, which showed a slight change of mood which might betoken something more severe or might merely serve to indicate a personal predisposition or constitutional bias. In all of the above mentioned conditions there were certain fundamental features which made for uniformity. He stressed, especially, how alternating states "pass over the one into the other without recognisable boundaries but also may replace each other in one and the same case."

The prognosis too was thought to be uniform as such cases were said never to lead to profound dementia, not even when continued throughout life almost without interruption. Usually all morbid manifestations completely disappear but when that is exceptionally not the case only a rather slight peculiar psychic weakness develops which is just as common to the types here taken together as it is different from dementias in diseases of other kinds. This, of course, was ample corroboration of the view of Hecker previously recorded.

Ætiology

Heredity

The above historical and definitive account has indicated clearly enough that the manic-depressive psychosis consists essentially of an exaggeration of mood changes which are common to everyone The manic or melancholic episode may appear as if from a blue sky without the presence of any precipitating factor or else the precipitating factor may be so slight as to have no significance In other cases the psychogenic physiogenic or neurogenic factors may seem more adequate especially when operating on a susceptible soil in a still smaller group the prepsychotic personality may appear well balanced but manic or depressive features may occur as a result of exogenous causes which have been particularly oppressive

Irrespective of the adequacy or inadequacy of exogenous causes the constitutional or hereditary character of the disorder has been always in the forefront as the most important predisposing ætiological factor A short statistical review culled from various sources substantiates that opinion

Kraepelin demonstrated a morbid predisposition in 80 per cent of his Heidelberg cases Other observers such as Walker Saiz Weygandt Albrecht have given very similar percentages Vogt reported that in 2 2 per cent of his cases mental disease existed in the father or mother in 35 2 per cent in the brothers and sisters against the corresponding values of 12 and 15 3 per cent in other forms of mental disorder Kolpin showed that of 10 children of the same parents both of whom were probably manic depressive 7 were affected in the same way Rehm in his study of children of manic-depressive parents found among 44 children from 19 families signs of psychic degeneration in 5 per cent particularly in 29 per cent abnormal emotional reactions especially depressive But in contrast is the statement by Kahn that out of 50 children the offspring of manic-depressive parents only 10 were manic-depressive

Barrett refers to the work of Sunner who analysed the hereditary components in a group of 630 cases of manic-depressive psychoses Sunner found that some sort of hereditary tainting existed in 84 13 per cent The most frequent tainting factors were psychoses among the antecedents which were noted in 43 86 per cent Other factors which were also present were nervous diseases 15 1 per cent apoplexy 11 8 per cent alcoholism 9 8 per cent abnormal character 11 5 per cent and suicide 4 8 per cent The parents of manic-depressive cases show psychoses of some kind in 12 5 per cent of instances which is slightly less than the general average of the psychotic e g 15 5 per cent Apoplexy was found to occur in 5 per cent and suicide in 1 per cent of the parents The siblings show abnormalities in 11 per cent while among

rate clearly planned so as to give a feeling of satisfaction and completion At other times there results merely an act of perplexity or an evasive substitution Some of the reactions to emergencies or difficult situations are mere temporising attempts to tide over the difficulty, based on the hope that new interests crowd out what would be fruitless worry or disappointment complete or incomplete forgetting is the most usual remedy of the results of failures, and just as in attention and distraction correct a tendency to overwork, so fault finding with others or imaginative thoughts or praying or other expedients are relied upon to help over a disappointment and, as a rule, successfully "

More recently, Meyer has introduced the term "ergasia", meaning by it every kind of activity, overt or implicit, of the psycho biologically integrated organism He wants to explain the psychosis in terms of the situation reaction and subject organisation 'Ergasias , he says, "are occurrences, functions and doings best studied in dynamic rather than static terms of experiment of nature The mal adaptations or difficulties of functioning may be transitory or permanent, stationary or progressive They may involve structure or function, and the psychiatrist must be a physician, not a psychotherapist, who has at his command a general medical training which will enable him to deal with all the complexities both of an individual and social nature The emphasis therefore is placed essentially on what can be done for the patient rather than on nosology and prognosis

Thymergastic reactions in the main, equivalent to manic depressive psychosis, tend to appear as one or more circumscribed attacks with or without special precipitating factors and more situation or more constitution determined either largely depressions or largely elations, often interchanging in type, sometimes in closed cycles (circular), the duration dependent largely on the personality type ' Here we have a live, vital approach not only to an under standing and more correct estimate of the affective psychosis but to all psychiatric problems in general The position is clearly defined in terms which allow of precipitating factors specific situation or constitutional elements being given their correct and appropriate value The depression or elation or inter mingling of the two is probably determined by the inherent constitution The question of complete or incomplete readaptation will depend on the adequacy or inadequacy of the patient's ability to meet the strain and stress of everyday life

The more specific approach of the psycho analytic school towards the under standing of affective states can be dealt with more appropriately under the caption of psychopathology

mission of mental disease Myerson finds it exceptional to have schizophrenics and manic-depressives in the same sibling family group With that statement I am in complete agreement For many years I have paid particular attention to that point and it is only on rare occasions that typical schizophrenics and manic-depressives are seen as brothers and sisters Rudin probably the greatest authority in relation to questions of heredity and mental disorder has stated more or less categorically that if one of the parents is manic-depressive 33 per cent of manic-depressive children occur plus an equal number of cyclothymics If both parents are affected these numbers would be greatly increased Lange another strong supporter of the hereditary basis of the manic depressive psychosis has stated that it is unquestionably a hereditary disease According to Lange even the time of onset of the circular disorders is hereditarily fixed but the cycles may on occasion be modified by external constellative influences He believes that critical times such as puberty pregnancy childbirth the menopause and severe infections exert an important influence

Recently Rosanoff Handy and Plesset have made a most important and interesting contribution to the heredity of the manic-depressive psychosis and I offer no apology for giving a comprehensive resume of their findings Out of a series of 1 014 pairs of twins they have separated 90 pairs of twins with manic-depressive syndromes From an analysis of their material which consisted of 23 pairs of monozygotic twins 35 pairs of same sex twins who were probably dizygotic and 32 pairs of opposite sex (dizygotic) twins they suggest the following interpretations

1 Heredity or germinal factors play an important part in the ætiology of manic-depressive syndromes as is shown by the contrast between monozygotic and dizygotic twins with respect to the percentage of cases of both twins of the pair affected 69 6 per cent for the monozygotic and 16 4 per cent for the dizygotic twins

2 Heredity or germinal factors in themselves are found inadequate i e they do not suffice to produce the manic-depressive syndromes as is shown by the high percentage of cases among monozygotic twins in which only one of the pair is affected 30 4 per cent in our material Factors in some cases other than heredity are required to produce the pathogenic effect

3 Heredity or germinal factors are not always present therefore not essential in the etiology of manic-depressive syndromes This is shown by the relatively high proportion of cases among dizygotic twins in which both of the pair are affected 16 4 per cent

The above findings are an excellent illustration of the complementary character of nature and nurture and indicate how unwise it is in most instances to attempt to divorce the one from the other In confirmation of the third paragraph attention is drawn to a report by Pollock Malzberg and Fuller who

the non psychotic only about 3 per cent of the siblings are abnormal The siblings of manic depressive cases commit suicide more frequently than those of other psychotics The general conclusion arrived at is that, of all types of psychoses manic depressives have the greatest frequency of hereditary tainting The tainting is predominantly psychotic, and transmission usually is in a direct line

Myerson is emphatic in his belief that clean cut cases of manic-depressive are followed by similar or identical states, although schizophrenia may also occur He reports Kreuger and Luther as confirming his opinion and presents a statistical table which Luther prepared from an analysis of 62 cases collected from various sources The 77 descendants concerned were affected as follows

Disease	*Number of descendants*
Manic depressive	43
Schizophrenic	22
Idiocy and Imbecility	6
Paranoid	2
Epilepsy	2
Amentia	1
Hysteria	1

The above table indicates in a very clear way that among the descendants of manic-depressive parents the two main trends are towards manic depressive and schizophrenic states Other examples mentioned by Myerson are the findings of Jolly who reported 14 cases of manic-depressive psychosis in the ancestors of which 4 were followed by manic depressive states 8 by schizophrenia 1 by paranoia and 1 by puerperal insanity Rosanoff in 10 cases of two generations diseases with manic-depressive in the parent found 4 schizophrenics 3 manic depressives and 3 epileptics in the descendants Working from the contrary direction of descendant to ancestor, Wolfsohn found twice as many manic melancholic ancestors in the history of schizophrenic patients than of schizophrenic ancestors Although the above reports may seem a degree conflicting yet Myerson was certain that uncomplicated manic depressives are followed by manic depressives and that the difficulty of distinguishing some catatonic attacks and some transitory depressions of other diseases from the excitement and depression of manic depressive states cannot be excluded as a factor in the problem

In relation to involutional melancholia Myerson found that the insane descendants of patients with involutional melancholia suffer practically always from dementia præcox or schizophrenia That however, is an opinion which requires to be accepted with considerable reserve as the amount of analysed material on which it is founded is very scanty Regarding the horizontal trans

The tables prepared by Rosanoff, Handy and Plesset and by Bonnar correspond closely to general experience and most of us would agree that the ætiology of manic-depressive is a constellative affair so that it is often impossible to say how much importance we should attach to one factor or one set of factors in relation to the others. A predisposition may remain entirely latent until exogenous factors become operative, while on the other hand inherited factors may play an important rôle even in diseases which may be considered as due to exogenous causes.

So far as we know them at present, these are the actual facts but we are still very far from understanding the underlying mechanism, hereditary or otherwise, determining the causation and onset of the manic-depressive psychosis. We had hoped that the Mendelian hypothesis might allow us to predicate the development of the manic-depressive psychosis with greater accuracy, but while this work has been extremely suggestive it is inconclusive. Much more detailed investigation of well-controlled and unequivocal cases has to be undertaken before we can speak with any sense of certainty regarding the mode of hereditary transmission. We know, however, that the percentage incidence of the manic-depressive disorder among children of manic-depressive parents is higher than would be expected if the manic-depressive factor were recessive. The percentage, however, is not so high as to constitute a pure dominant. Hoffman has therefore suggested a manic-depressive character which requires another factor, perhaps inherited from the other parent, to precipitate the psychosis. Rüdin agrees with Hoffman's opinion and rejects the view that hereditary transmission in this disease occurs in the manner of a simple Mendelian dominant character or of a recessive one or as a simple sex-linked one. He favours a dimerous inheritance in which two recessive and one dominant pair of factors appear. Rosanoff, Handy and Plesset in an attempt to explain the quantitative clinical differences which occur, the excess of incidence in woman as compared with men, and the varying operation of dominant and recessive modes of inheritance have put forward a somewhat ingenious hypothesis. They assume the existence of a cyclothymic factor (C) in the autosomes widely distributed in human populations and an activating factor (A) which is assumed to exist in some individuals and in some familial strains in one or both of the X chromosome. Acting on the above hypothesis human subjects may be classified with reference to the cyclothymic component of temperament into six types of men and nine types of women. Among these types two in men and four in women represent temperamental constitutions which make possible the development of manic-depressive psychoses.

Although the matter and mode of hereditary transmission in the case of the affective disorders is still an unsolved problem, yet we have sufficient evidence to allow us to say that heredity is the most essential factor in their de-

among 745 siblings of manic depressive patients, found a total of 29 cases of mental disease of whom only 11 or barely 1 5 per cent were manic depressives

The only other investigator, who has made a systematic statistical study of the manic depressive psychosis in twins, is Luxemburger, and although his material is not nearly so satisfactory as that of Rosanoff and his co-workers yet it shows the contrast which exists between monozygotic and dizygotic twins with regard to the relative proportion of cases in which both twins of the pair are affected, and that among monozygotic twins with manic depressive psychoses there are instances of discordant findings i e, in which only one of the twins is affected, the other being normal Rosanoff and his co-workers are satisfied that their material bears out the statement that manic depressive psychoses are "the most hereditary" of all the commoner psychoses

Although they stress the hereditary nature of the manic depressive psychosis, Rosanoff, Handy and Plesset are well aware of the importance of exogenous or precipitating factors and instance the results of an analysis of 1,410 first admissions with manic depressive psychoses to the New York State Hospitals during 1933

Loss of employment or financial loss	370
Physical illness	190
Disappointment in love	96
Death in family	54
Pregnancy and childbirth	53
Alcoholism	41

Bonnar undertook a detailed analysis of 100 patients 63 women and 37 men Heredity was found to be strongly positive in 30 cases, mildly positive in 20, negative in 44 cases and unknown in 6 cases Frequently there was a constellation of factors rather than any single outstanding one The various factors were classified as follows

	Cases or per cent
Friction or discord in the family	25
Reaction to financial situation	15
Recent death in the family	9
Serious anxiety for member of family	16
Disappointment in love	6
Severe emotional stress from other cause	7
Undue reaction to unavoidable situation	5
No known psychogenic factor	17
	100

It is pointed out that the situations which have been tabulated are present in most of our lives and those who succumb are persons lacking in resistance and emotionally unstable

there are however many unfortunate contrasts It is perfectly true that in those cases in which the exogenous factors are especially prominent then the procreation of children may be undertaken without unnecessary alarm as to the possible development of manic-depressive disorders In connection with these matters it is well to remember that not very many people ask for advice and guidance and even although they do they may not be impressed or guided by what is said Now however when the employment of contraceptive methods is being looked upon with a more lenient and understanding eye it is often permissible to recommend marriage even though the marriage has to be a childless one This is particularly so in those cases in which one or both parents may be manic-depressive and in those cases in which the stress and strain of child bearing is apt to produce a morbid affective response on the part of the mother

Physicians should give much more serious thought and consideration to these matters than has been the case heretofore Marriage is often prescribed quite indiscriminately as a cure for all manner of nervous complaints without due regard to the possible consequences of such glib advice For many people marriage is a method of rounding out life it increases a person s sense of self respect and self pride it makes him feel that he is no different from others and in this way it may lead to happiness and health even though parenthood may *not be deemed advisable But marriage is not to be lightly advised or under* taken It is a difficult adaptation one of the most difficult a person is called upon to make In some cases when the right partner is available the unstable person may attain a stability and happiness which he never thought possible but in other circumstances he may be plunged into unhappiness wh ch is the surest precursor of nervous and mental ill health And this is often greatly accentuated when either the father or mother feel that they have been the *means of producing an unhealthy stock While these are the facts I am still* a long way from believing that we have any moral legal or social justification for advising the sterilisation of those who may happen to suffer from the most recoverable of all the psychoses We can make suggestions guide and reassure but we have not sufficient knowledge to decide absolutely who should marry and who should not who should have children and who should refrain

Other constitutional etiological factors the importance of which it is difficult *to assess as they have no real specificity are (a) age (b) sex*

Age

Episodes if not attacks of manic-depressive states starting at the age of ic years or even earlier have been described but such cases must be extraordinarily rare In my experience now extending well over a quarter of a century I

velopment If this is accepted, then a practical question which often arises acutely is as to what advice should be given to those of manic-depressive constitution who are contemplating matrimony The question bristles with difficulties and cannot be answered in a dogmatic or arbitrary way either positively or negatively The facts and knowledge we have are valuable so far as they go but they are not accurate enough to allow us to lay down laws which must hold in every case It is more or less axiomatic to say that each case must be considered on its merits, and before attempting to advise or pass judgment, a thorough investigation must be made of the family history of both contracting parties Sometimes it is difficult to get sufficient history on which to found an adequate opinion and, under such circumstances it is probably wiser to refuse to take the responsibility of giving advice or guidance regarding a matter which is so important and so fraught with disastrous consequences

While manic depressive states are essentially of endogenous or constitutional origin yet we recognise that in a considerable number of cases the manic depressive state may remain latent unless precipitated by exogenous factors Should then a distinction be made in relation to marriage between the predominantly constitutional and the predominantly exogenous? It might be possible to do so if we could be sure that we were correct in our estimation of what is predominant, but there are many cases in which one observer would stress the constitutional factor and another observer the exogenous factor so that in practice it is not advisable to attempt to distinguish too closely between these two sets of cases which, if they are divided by any line at all are only separated by a very narrow line indeed

If we have a patient who comes from a cyclothymic stock, and who may himself have shown evidence of emotional instability, should he be advised to marry? If he is advised to marry, should he be recommended to take precautions to avoid parenthood? These two questions raise the distinction between marriage as a state of companionship and marriage as a state of parenthood My advice to a person who comes from an unequivocal cyclothymic stock and who himself has shown emotional fluctuations is to refrain from marriage both for his own sake and for the sake of the other person If however the person comes from an unequivocal cyclothymic stock has attained the age of 25 years and has not shown any traits suggestive of emotional fluctuation, then it is reasonably safe for that person not only to marry but to have children provided he marries into a family which has a healthy family tree

While I recommend this as a safe plan yet it must be said that I have known many persons who have passed through classical manic-depressive attacks of a constitutional nature who have married and had families that are healthy and who themselves have never suffered from any subsequent attacks

times his manner approached an ecstasy he said that he was going to Dad because there were saints on high who had died for Britain His hand and arm were held in an awkward position and when asked for an explanation he described his arm as a serpent He complained of auditory and olfactory hallucinations

The above illness had developed acutely in the course of a few days His father had suffered from transitory episodes of a depressive nature In the course of a week or two the patient made a satisfactory recovery

(2) A young girl at the age of 15½ years had a depressive attack which did not require mental hospital treatment At the age of 19 years a manic episode occurred during which she exhibited the classical symptoms but in addition showed certain anomalies She was suspicious thought her work mates were against her posed in front of the mirror was hallucinated and threatened to kill her sister s children In the course of three weeks she made a good recovery

(3) A case which may be utilised to illustrate the transient nature of manic episodes and the difficulty of separating them from mere wilfulness or a boyish prank is the case of a young man who at the age of 17 years suddenly left home and travelled by a circuitous route to London His money becoming exhausted he walked for many miles without food and eventually collapsed In a day or two he had sufficiently recovered to return to his occupation

Eighteen months later he became excitable and restless said that he must proceed to London to produce a play He was detained at home only with the greatest difficulty

Eighteen months later a third attack occurred preceded by nervous excitement elation and sleeplessness He told his family he had passed an examination which he had never taken that a theatrical producer had offered him a salary of £1 000 per week that he had written a play to be produced by Komisarjevsky to which for 17 days the public would be admitted free that he would sue the Royal Infirmary for £25 000 for illegal detention that he would become a star that the future of his family was assured This third attack lasted considerably longer than the two preceding ones

(4) A boy 14½ years old was arrested by detectives because for several weeks he had been accosting girls His conduct was harmless enough He had been in the habit of telling the girls that he was the representative of a film company that he could obtain positions for them at £5 a week and that he would look after their future He was referred by the police for psychiatric examination

He was a tall asthenic looking rather pleasant faced youth who appeared considerably older than his years His attitude was confident and nonchalant He entered the out patient clinic at the Royal Infirmary Edinburgh before a

cannot recall any case having occurred at so early an age Kasanin states that at the Boston Psychopathic Hospital where approximately 1,900 new patients are seen each year, only two or three children have been observed each year showing affective psychoses The usual response of the child to questions regarding nervous or mental health is to the effect that he is not feeling well and such a reply is apt to be considered as implying something physical rather than psychological It may well be that on this account mild manic depressive attacks escape notice Kasanin however, had the opportunity of observing 10 cases 6 boys and 4 girls all between the ages of 10 and 15 years, who have shown disturbances of an affective or manic depressive nature In of the cases the disorder was on a kinetic level e g over activity, restlessness and evidence of profound mood changes In the above connection he states that Luria and also Levin have shown that experimentally induced emotional conflicts produce states of extreme restlessness and other kinetic disturbances in children In the other 8 cases mood disturbances were prominent with well-defined elation or depression All the above mentioned disturbances were much less marked than in the case of adults Sometimes the clinical picture was not clean cut and considerable difficulty was experienced in separating benign from malignant features Other points of interest which Kasanin noted were that visual hallucinations were not uncommon, "due to more facile eidetic imagery there were no special trends, the immediate cause was often most trivial In 5 cases there were serious physical anomalies and defects in 3 children sex conflicts seemed to be significant In all cases, the environmental conditions were satisfactory while another noteworthy feature was that none of the children had attempted suicide This latter observation is of interest because of the contrast with Italian statistics where it has been estimated that over 5 per cent of all suicides take place in children under the age of 15 years child suicide is also stated to be frequent in Germany One of the specially interesting features and one which can be exemplified by case records is the fact that affective disturbances occurring in children almost invariably carry a most serious prognosis Recurrences are very common and a certain amount of deterioration occurs The question as to whether this deterioration is dependent on the presence of a schizophrenic component would be worthy of serious consideration

(1) One of the youngest patients I have seen is a boy, 15 years old, whose condition was more closely allied to a mixed manic state than to one of the purer types The predominant elements were restlessness, a vivacious expression he had a twinkle in his eye and a mischievous flippant manner At first he hardly spoke at all but a few days later, he tagged a title on to his name, referred to himself as Sir James said that he lived in Buckingham Gardens, really Lochend Gardens thought that his age might be one or two years At

Exogenous Factors

The exogenous factors whether of a physical or psychical nature play a minor rôle in causation they act more as precipitating agents than as the main factors But in every case all the factors which may in any way be having an injurious effect on the health of the patient require the most careful investigation and treatment Alcoholism which formerly was thought to be an important agent in producing all kinds of mental disorder is now recognised as being far more often a symptom than a cause of mental instability It can however be a most troublesome symptom and may tend to aggravate and prolong the treatment of manic-depressive states

Syphilis and venereal disease of any kind may attain ætiological significance principally by causing remorse and feelings of guilt but in addition all forms of bodily illness and ill health such as influenza pregnancy head injury focal sepsis and a host of others may on occasions act as precipitating agents As an example I can cite the case of a young man who following a severe concussion was unconscious for six days and then passed into a typical manic state characterised by elation over talkativeness with flight of ideas and extreme psychomotor restlessnesss

A more familiar type of case is that of a young married woman who shortly after the birth of a still born child became apathetic listless and refused to eat. This was followed by a period of intense elation and excitement Three years later following the birth of another child she became excited and suspicious for a short time the acute stage lasting for a week and subsiding thereafter Four years later following the birth of another child she was readmitted to a mental hospital in a state of excitement and restless agitation For about a month she required to be tube fed and then gradually became quite coherent and sensible She was discharged but after three months was re admitted and for the past 17 years has been under constant mental hospital treatment Her present state is one of continuous excitement corresponding to the picture of a chronic mania

In addition to physical causes we recognise the potency of psychogenic influences e g the death of near and dear relatives cases of unrequited love a fall in the family fortunes etc When cause and effect stand in such close relationship as evidenced by the cases described we have been in the habit of terming them reactive states in contrast to the more definitely constitutional or endogenous states but the distinction drawn is extremely limited far more limited than was at one time supposed This point will be elaborated later in a discussion of the clinical types

group of students and was quite unabashed He readily entered into a discussion of his case He said that some one else, whose motives were not so pure as his own, had suggested to him that he might approach girls and make appointments with them for a further interview which his friend would keep instead of the patient He stated that he talked what he described as "a lot of American bunk , that he felt quite confident, and that "spinning a tale' came easy to him During examination he was quietly talkative, not exuberant but with an elevated mood and a ready answer His history showed that his parents were of a high strung excitable disposition He had been a rather delicate, nervous child, but had been perfectly intelligent At the age of 11 years he had had a period of excitement which persisted for several weeks at that time in a fit of rage he had struck a school master After leaving school he occupied six positions in about as many weeks He was discharged from each on account of inefficiency, not seeming to have his mind on his work and for showing aggressiveness and exuberance On one occasion he struck his employer on another occasion while his employer was not in the shop he sold a table valued at 25/- for 15/- and in general behaved in an irresponsible way A few weeks' residence in hospital resulted in recovery with good insight into his past conduct

All the above cases reflect the acuteness of the process as it occurs in young people, but also the tendency to frequent recurrences and the rapid recovery from each individual attack The ultimate outlook, however, cannot be looked forward to with much feeling of security

Sex

Kraepelin estimated that 75 per cent of the patients affected were of the female sex He thought that the preponderance of women affected might be explained as being due to the strain of adaptation to the onset of menstruation to pregnancy, the puerperium and the menopause The real explanation however lies much deeper as the above factors by themselves are not likely to have much effect unless the individual has a predisposed temperament Rosanoff has shown that in 32 pairs of opposite sex twins both of the pair were affected in 3 instances the male twin alone in 5 instances the female alone in 24 instances a relative excess of females as compared with males amounting to 237 5 per cent

Pollock computed that of 4 737 first admissions of the manic depressive group to the civil state hospitals of New York during the five years 1918-19 3 there were 1 695 males as compared with 3 042 females The average annual rate of first admissions per 100 000 of general population of same sex was 6 5 for males and 11 7 for females On the basis of equal population therefore, there would be 180 female cases to 100 male

man Earle delineated even more specialised types as exemplified by the antiquary, the sceptic in religion the drunkard the meddling man the rash man Spranger in 1928 presented a classification based on the special values which dominate the lives of man 1 The theorist or intellectualist a man with a passion for objective knowledge an individualist who is radical cosmopolitan aristocratic 2 The economic man who prefers utility to all other values He is egotistical and possessive 3 The æsthetic type whose attitude is described as one of pure contemplation devoid of passion and aggression 4 The social type the vital principles of whose life is interest in others Love is the social quality in its highest development 5 The political type whose chief aim is to attain power 6 The religious type who seeks the creation of the highest and absolutely satisfying life experience

Campbell in commenting on the above groupings states that they emphasise the diverse ways in which the human personality adapts itself to experience They are appraisals of groups of individuals forming the so-called normal population and have little clinical significance

The association and correlation of the forces of the personality in relation to mental state and bodily habitus have been of comparatively recent date The American school of psychiatry, headed by Adolf Meyer and August Hoch deserves great credit for its clear formulation of the topic personality and psychosis and Amsden Campbell Kirby and Wells have contributed many enlightening papers Hoch in his paper on '*Personality and Psychosis* stated that the relationship between an individual's characteristics and the type of psychosis from which he may suffer sometimes is so obvious that it has attracted more or less general attention This has been particularly evident in manic depressive states where mild attacks often seem to be an exaggeration or continuation of the normal personality

Manic depressive patients may be described on the one hand as over active vivacious easily excited high strung enthusiastic on the go while on the other hand they may be dull gloomy subject to blue spells inclined to fight their battles over again Such contrasts of mood were found by Hoch in 44 per cent of 18 cases the elated type in 18 per cent and the depressive type in 26 per cent In those patients who developed manic attacks the hypomanic traits of the personality predominated over the depressive traits and vice versa From his study Hoch was led to express the view that both the pre psychotic morbid personality and the psychosis were determined by constitutional factors and showed themselves when the individual found himself unable to adapt to his actual circumstances

Reiss quoted by Kraepelin made an interesting summary of the frequency with which the type of psychosis corresponded with the morbid temperament

Pre Psychotic Personality and Physique

The term personality is used in many different ways, but as we employ it in clinical psychiatry, we define it as "the integrated activity of all the reaction tendencies of the daily life of the individual" (Henderson and Gillespie) In other words, it is the individual as known to his friends, the man at his best or more dynamically the man in action It has even been used in a much wider sense as the sum total of the various levels of integration of which the individual is constructed, e g, vegetative (endocrine sympathetic), sensori motor (central nervous system) and the psychic level Personality in its clinical sense is built up from the innate endowment or heredity of the individual, plus his environmental circumstances and his ability to meet the conflicts or difficulties which are in front of him, constituting his reactive tendencies or ability to adapt to changing circumstances We all have certain methods of adaptation determined consciously or unconsciously, some are successful, adequate and compatible with health, while those others which are substitutive, evasive or inadequate may constitute the symptoms of mental illness We are, therefore, deeply concerned not only with the qualities which are inherent in the constitution but also with those factors which create a good or bad environment We recognise that the behaviour patterns and reactions of childhood are likely to be a guide to behaviour at a more adult level, and we are hoping that by studying what is correct and what is faulty we may gain information to help us both in guiding developing youth and in remedying and controlling the nervous and mental illness of later life It may be visualised how important a study of the pre psychotic personality is likely to prove, and what a vital interest it is liable to create by encouraging attempts to estimate the reactive tendencies of the individual in the light of his constitution and environment

The Greek physician Galen 2nd century A D, has the distinction of postulating four fundamental temperaments the sanguine phlegmatic, choleric and melancholic The basic idea of the above differentiation reverts to the Hippocratic era when the human body was described as composed of the four elements air water, fire and earth Corresponding to the above elements, blood phlegm yellow and black bile were found in the living body, the unequal mixture of these four components supposedly allowed people to be grouped into four different classes The full blooded were the sanguine, those with more phlegm were the phlegmatic the temperament was choleric, when there was preponderance of yellow bile and melancholic when black bile was in the ascendant

Campbell in human personality and environment" refers to the attempt of Theophrastus to give precision to special character traits He described, for instance the flatterer, the boor the loquacious man, the gossip the penurious

healthy minded constructive way whether he is in touch with things as they are or whether he is apt to be diffuse absent minded lacking in purpose and easily side tracked The questions to elicit these various points must be left to the individual examiner

2 The *somatic demands* ' concern themselves specially with motor activities and the demands of sex Motor or better, psychomotor activity involves the questions whether the patient was lively or sluggish i e whether there was push and energy as evidenced by talkativeness and enthusiasm or whether he was inert and lacked initiative whether there has been much interest in sports games hobbies or whether there has been idleness and lassitude Regarding sex it is important to know how much the topic has interested the patient whether the reactions to it have been hygienic or unhygienic whether there have been unhealthy habits actual and mental masturbation prudishness or its opposite Some importance has been attached to vaguer matters such as nail biting and response to mucous membrane stimulation eating drinking smoking

3 *Self estimate and self-criticism* depend largely on comparing ourselves with others Such comparison may bring with it a feeling of satisfaction or a feeling of failure according to whether the comparison is favourable or unfavourable If the comparison is favourable the reactions are likely to be capable and adequate but if unfavourable a variety of responses may be elicited Either the individual may realise his deficiencies and attempt to correct his shortcomings in a healthy way, or else the individual may shrink become sensitive self effacing and dependent Again evasions and compensations may be called into being A sidelight on these various aspects may be obtained by the knowledge of whether the person is greatly influenced by the opinion of others whether he is proud fussy and makes much of discomforts Other important sidelights are the individual s ability to make friends the degree of easiness or uneasiness in the presence of strangers and the tendency to jealousy The questions of over conscientiousness and the ability to take advice also come in

4 *The urgency or imperative to adaptation* centres round the question why we need to adapt ourselves at all This as Amsden says is the crux of the whole study because it is just these tendencies which favour or impede adaptation which are so important A constructive assertion of it is seen in ambition courageousness and vigorousness generally Where we find a diminution of such tendencies we must attempt to get some explanation for it

With this background we are now in a position to enter into a consideration of the more specialised studies of Jung Bleuler and Kretschmer Jung s monumental work on psychological types is so all-embracing in its scope that any attempt to abstract or summarise it would fail lamentably to do it justice We must be content to give his views in as simple a manner as possible He divides mankind into the two broad divisions of *extraverts* and *introverts* a division

	Depressive	Manic	Combined
Depressive temperament	64 2	8 3	27 5
Manic temperament	35 6	23 3	41 1
Irritable temperament	45 5	24 4	30 1
Cyclothymic temperament	35 3	11 7	53 0

Hoch and Amsden recommended a schema which had for its purpose the more accurate study of personality traits Their idea was to get a good picture of the individual as he was at his best, i e, before his psychosis had occurred While this guide was to be used essentially to correlate disposition faults and failings with the psychoses, they hoped especially to disclose reactions in early life which might be danger signals of future nervous or mental ill health It was emphasised particularly that the personality should not be regarded as something static and fixed, but that the traits and characteristics and reactions of a person varied throughout the person's life The particular traits to be enquired into were arranged in eight more or less arbitrary divisions which show a degree of overlapping 1 General intelligence, knowledge and judgment 2 Output of energy 3 General attitude towards environment 4 Attitude towards self inner mental life 5 Attitude towards reality 6 Mood emotional reactions 7 Sex instincts 8 Feeling of inferiority In 1923 Amsden improved upon the above guide by grouping the personality traits under four main headings 1 The intellectual faculties 2 Somatic demands (physical activities) 3 The individual s self criticism and self-estimate 4 The urgency or imperative to adaptation Such a plan is an excellent way of obtaining a good idea of the type of person we may be dealing with We, of course, do not rely only on the information which we may obtain from the patient, but widen our enquiries so far as to interview the relatives and personal friends Repeatedly we find that the information we derive from personality studies not only helps us in coming to a more accurate understanding of the matter in hand but often is of inestimable help in treatment The inherent character, the stuff out of which the personality is formed, is what we rely on in forming a prognosis as to whether or not successful adaptation is possible Where pre psychotic traits and psychoses are so closely interwoven as in manic-depressive states, then personality studies of this type should be a great aid and are almost an essential of prophylaxis

Amsden s scheme as summarised by Henderson and Gillespie is as follows

1 In a description of *intellectual activity*, the points which we specially desire information about are, (*a*) the readiness with which knowledge is acquired, (*b*) the power of retention (*c*) the ability to be guided by past experience These points can be elicited by having a detailed account not only of the patient s schooldays but also of his business and family life We want to determine whether the well endowed type is able to co-ordinate his activity in a

found effect in producing pathological changes Furthermore the exhibition of gland therapy in most forms of nervous and mental illness has proved a dismal and disappointing failure Even though this is so we recognise that a dysfunction of the internal glands may lead to profound bodily and psychic changes We know that the anterior pituitary has to do with tissue growth and the development of secondary sexual characters the posterior lobe is associated with carbohydrate metabolism and insufficiency may lead to Frohlich s syndrome e g also the fat boy whom Dickens made famous The anterior lobe seems to have a masculine role while the posterior lobe is of special significance in woman being associated with her sex instinct

Thyroid deficiency is associated with cretinism and myxoedema and the characteristic bodily and mental changes which accompany these conditions whereas when the thyroid is over active states of over anxiety and excitement occur The parathyroids are closely linked up with calcium metabolism and it has been suggested that explosive outbursts in children may be due to their faulty functioning

The adrenal glands are associated with the name of *Addison* who described a clinical picture of extreme muscular weakness fatigability and pigmentation We know that a good *adrenalin* content of the blood is necessary to enable us to meet emergencies to be virile and aggressive while when a deficiency exists fear anxiety and cowardice may be in the fore front.

The reproductive glands exert a paramount influence on human development and their activity to a large extent may determine sexual desire and potency Their relationship to certain forms of sexual inversion still is quite uncertain

Once the normal physiological function of the internal glands has been fully demonstrated we may hope to find a bridge connecting the physiological with the psychological but in the meantime it is wiser to avoid drawing correlations which cannot at present be substantiated

With this digression we may return again to Bleuler who points out that while affective disturbances are qualitatively correct quantitatively they become exaggerated and that is the position usually in manic and depressive states There may be a real tangible reason for the joy or sorrow but it becomes unnaturally protracted and he surmises a possible lability of the endocrine glands He prefers to use the terms syntonic and schizoid rather than extravert and introvert The syntonic reaction may remain at a uniform level and be perfectly normal If however a swing occurs either towards elation or depression then a cyclothymic state occurs which if characterised by severe and prolonged fluctuations is designated as manic-depressive He does not however consider that this is a pure state as every man is supposed to have one syntonic and one schizoid component Mixtures may and

which had been expressed by William James as the tough minded and tender minded The differentiation of the above types is not so easy as might seem to be the case There are many exceptions, and each person must be considered as a concrete proposition

The extraverted child adapts himself quickly to his environment pays particular attention to objects, has very little inhibition and no fear, he finds the unknown a source of interest and does not mind risking himself in new adventures The introverted child is reflective, shy, shows anxiety over unknown objects greets the unknown with mistrust, is timid, shrinking, he also questions not so much out of curiosity or desire for sensation, but simply because names meanings and explanations are a source of assurance

In connection with the above types there is a development of certain functions which are common to both types and these functions are *sensation, thinking, feeling* and *intuition* They are very seldom or never uniformly developed one or other function usually is in the foreground The people who take things at their face value and who do not worry about possibilities are the "sensation" types The "thinking" types must be satisfied intellectually before they can adapt to the actual circumstances The "feeling types are concerned only with what is pleasant or unpleasant The "intuitives" are not concerned with reality but are always thinking in terms of possibilities But, in addition to the conscious there may be subconscious or unconscious forces at work which probably are compensatory to the conscious

Bleuler with interest directed towards clinical differentiation and application to psychiatry does not think so much in terms of opposed personalities but more of an interplay of personalities in which the elements present are balanced in various degrees In his use of the term, affectivity, he includes both somatic and psychic manifestations Affectivity may vary greatly in different individuals at different ages, but it almost exclusively determines character, it is responsible for such things as laziness, energy steadiness, diligence, carelessness and it especially regulates our social adaptations He is quite uncertain as to its origin it may be constitutional in fact if any one is going to become an hysteric or paranoiac he requires an affective constitution which usually is congenital but on the other hand bodily metabolism as determined especially by the internal secretions" is of vast importance Bleuler, of course, allows his fancy to rove in this respect but we are still miles away from any certainty in relation to the action of the internal glands on bodily metabolism and especially in relation to the autonomic nervous system The fact that the internal glands may on occasions exhibit pathological lesions is no proof that they are the cause of any special form of mental disorder In every such case we must make allowance for the age of the patient, the duration of his illness the presence of intercurrent disease, the cause of death, all of which may have a pro-

	Cyclothymes	*Schizothymes*
1	*Hypomanic* Cheerful, lively, mobile	*Hyperæsthetic* Nervous introspective idealistic
2	*Syntonic* Practical realists easy going humorists	*Schizothymes* Energetic aloof systematic
3	*Phlegmatic*	*Anæsthetic* Cold eccentric apathetic

In a more graphic way the cyclothymes are described as everyday examples of the practical man of action and the bon viveur, and then follows a note regarding the more highly gifted cyclothymes

A From the point of view of artistic style free and easy, broad minded descriptive realists and kindly genial humorists

B In science empiricists who observe describe and experiment and popularisers of science who can understand the mentality of the man in the street

C In practical affairs benevolent sympathetic conciliators daring organisers on the grand scale sturdy adventurers

Kretschmer s claims have been subjected to much criticism but it is probably correct to state that at least a higher proportion of manic-depressive patients show purer pyknic build than is the case among the average population The possibilities suggested by such work are endless and on the whole it adds support to the belief that with manic-depressives we are dealing with a group of a specialised physical and mental make up which can to a certain extent be correlated

Freeman Gray and Ayres and especially Wertheimer and Hesketh have made further contributions of great importance Wertheimer and Hesketh have supplemented observation by exact measurement and have devised a new anthropometric index based on four simple measurements They consider that in previous work sufficient allowance has not been made for age and growth and they believe that they have proved that for the pyknic type especially the incidence increases with advancing years

All of the above-described work is indicative of the vast change which has occurred in psychiatric thought and practice We are not thinking in terms of symptoms or of clinical groupings important though their analysis and description are but in each case we are attempting to form an estimation of the patient as a total individual taking into consideration all the hereditary physical mental and environmental factors which may have any influence in determining his reactions healthy or faulty Special emphasis is being placed on the modifiability of inadequate or unsatisfactory behaviour patterns or engrams formed in childhood Everything may have a bearing the health of the parents the domestic situation generally the constitution of the child his endocrine system the actual living conditions to which he has been subjected

frequently do occur, so that we should always ask, to what extent manic depressive, to what extent schizophrenic?

Even more recently Kretschmer has made an intriguing advance by endeavouring to prove not merely a correlation between pre psychotic disposition and psychosis, but also that a close association exists between mental characteristics and physical states His views have been fully described in his two books 'physique and character" and "textbook of medical psychology"

The main gist of his argument will be given as simply as possible Kretschmer is a strong believer in the mechanistic power of the internal glands, but widens the issue by stating that the intestinal glands, and "in fact, all the tissues which affect the chemistry of the blood must be taken into consideration" As to physical habitus, he describes the pykno somatic type of physique as predominant in those who suffer from manic-depressive states Schizophrenics, on the other hand, show a diversity of physical types, the most common of which are lepto somatic (asthenic) and athletico-somatic forms of habitus There are also among schizophrenics dysplastic groups, e g , elongated eunuchoidism, infantilism and hypoplasia His pykno somatics in middle age are described as the thick set people with short extremities, a roundish well nourished appearance and usually a fresh complexion The skeleton is delicate, the musculature soft and the distribution of fat in the regions of the face, neck and trunk is generous The circumferences of the head, chest and belly are large but the shoulder girdle is rather narrow and compressed This combination of features gives the torso a somewhat barrel shaped outline The head is set slightly forward and is carried on a short, rather thick neck In typical specimens, the cranium is low and deep with a flat crown and well rounded occiput The face is soft, broad and rounded with moderate and harmonious height dimensions The *separate facial features are well developed the profile delicate,* the nose fleshy The hands are short broad and soft, but delicately formed The pykno-somatics have soft thin, receding hair and a tendency to premature baldness whereas the beard and body hair is thick and luxuriant The table prepared on the basis of work by Van der Horst and Von Kibler is of interest and gives a good idea of how greatly the pykno-somatic type preponderates in manic depressive states

Physical type	*Cyclothymes* ♂	*Mixed or indeterminate* ♂	*Schizothymes* ♂
Pykno somatic	94 4	2 8	2 8
Lepto somatic	12 2	17 1	70 7

In addition Kretschmer describes six contrasting temperaments which he arranges as follows

quires into it the more certain one becomes that this is the rule rather than the exception We are all familiar with hypomanics although we may not recognise them under such a name They are always actively engaged in some thing secretary of this, chairman of that dictatorial argumentative witty people who usually are the life and soul of any party the live wires of the community They have a confidence and a nerve which enables them to rise to every occasion and they feel that there is nothing under the sun which is beyond their capabilities While this is so the condition may never proceed further the individual may be praised or cursed as an interfering busybody but very few would suggest that care and treatment under nursing home or mental hospital conditions was either possible or desirable

The hypomanic however is always on the brink of something more serious and the proverbial extra straw is never very far away The most trivial exciting cause may produce an emotional storm which may take a considerable time to settle In fact the upset may be so devastating that mental hospital treatment becomes imperative The mood is so elated not to say exuberant that moral and social barriers are cast aside and any attempt to interfere or dominate merely adds fuel to the fire But the mood is not stable it is as variable as the wind and may be punctuated by phases of anger and weeping the latter more an indication of irritation than real sorrow or grief Clouston gives a vivid description of the vagaries of behaviour which may occur when he says I have known great fortunes lost and even made great enterprises undertaken great speeches made great reputations impaired unsullied characters stained irretrievably in the public eye ancient families degraded marriages contracted adulteries committed and unnatural crimes perpetrated by men and women whom I considered to be labouring under mild attacks of simple mania but whom the world in general looked upon from the legal and ethical point of view ' Those persons were the victims of the tyranny of their organisation Clouston s story of the philanthropist who had marvellous plans to terminate the world s misery shows well the variability and instability of the hypomanic state This said philanthropist went one night with his Bible in his hand to a brothel to convert the inmates from the error of their ways ' but after reading and prayer the vice he hated was in one short hour endured, then pitied then embraced and he had to leave his Bible in pledge as he had not sufficient money in his pocket

On most occasions however there is a gaiety of mood and expression a ready sometimes pungent wit and an infectiousness which quickly influences whoever may be present He is so keen that nothing seems to escape his notice he comments on every sound he hears on everything he sees he notes peculiarities or mannerisms he does not hesitate to become personal and says whatsoever comes to his mind In consequence his conversation is subject to all

e g , atmospheric, dietetic, etc , all of which may exert a profound influence on his development and dispositional qualities The study of the affective disorders is only partly a problem for the mental hospital its elucidation requires co-operative research from many angles at a time long before the mental hospital need ever be thought of

Clinical Forms

For descriptive purposes it is convenient to use five main headings

1 Manic states
2 Chronic mania
3 Depressive states
4 Mixed states
5 Involutional melancholia

Manic States

Three main divisions are recognised, viz (*a*) hypomania, (*b*) acute mania, (*c*) delirious mania

It should be fully and clearly recognised that the distinctions between the above states are of a purely arbitrary nature The one may merge into the other without warning, and there is no steady progression from one state to the other Some hypomanics may never develop any of the more acute phases whereas other patients may almost at once merge into a state of delirium All of these phases are, however, characterised by a group of cardinal symptoms namely, elated mood flight of ideas and increased psychomotor activity This, however, is far from being the whole story In addition to the typical or classical symptoms many others occur which often give us cause for great anxiety in as much as they may be considered as signs of a more malignant or deteriorative psychosis We are learning not to be so easily side tracked as we used to be and the tendency has been to lay less weight on symptoms as symptoms and more on the type of person in whom the symptoms are occurring and the accompanying background or setting It will suit our purpose best to give a general description of the above states, to use a number of case records as illustrations of what is classical or more anomalous and unusual The presentation will thus be rendered more vivid and arresting

Hypomania —The hypomanic state is the mildest form, and may never proceed to anything more serious It may occur in pure culture and may not even be preceded by an initial depression, although a transitory depression is very frequently seen at the beginning of a manic attack There is no particular reason why a preceding depression should occur, but the more closely one en

insight into his condition He believes he is a better a stronger a wiser man than he was previously and any attempts to convince him of his serious illness merely result in a contemptuous or angry response It is always the other fellow who is wrong he is perfectly compos mentis and well able to manage his own affairs

It is this inability to come to a realisation of his illness which renders his care and treatment so difficult and which often results in his bearing resentment towards the mental hospital and its personnel But restraint and control of some kind is almost essential because otherwise there is the gravest danger of some serious catastrophe happening

Hypomanic state preceded by a depressive phase of six months duration The present condition was characterised by a state of restless over-excitement with elation over talkativeness and the expression of numerous grandiose ideas of a wish fulfilling nature Her conduct was unrestrained and erotic in striking contrast to her original shy reserved disposition

A young girl of 15½ years was referred to me with a history of having been depressed sleepless and disinterested so that she could hardly be made to speak, and refused food In five or six months this depressive phase lifted she resumed her school life but in the course of three months owing to her erratic unstable conduct she was sent home from school She wanted to buy everyone presents she made friends with strangers and frequently her parents had no idea where she was or what she was doing

In January 1935 at the time of my examination she adopted a free and easy attitude was nonchalant and quite unabashed She treated the consultation as a rather amusing experience showed great pressure of psychomotor activity and boasted of all her accomplishments She had developed all the talents she could whistle ride a horse write letters her sole purpose in visiting Edinburgh was to purchase a sports car and a watch Some day she hoped to make a position for herself on the stage where she would earn £800 per day She would marry at the age of 25 years have two children a boy and a girl because they are so much more companionable "

Her history showed that she had a step sister who was mentally deficient the patient s mother was described as hysterical The patient herself had been an imaginative sensitive shy introspective girl Her quiet reserved manner had always created a good impression She took her school work very seriously worried about it and was thought to be a little backward but this was probably partly due to having been off school on account of physical illness As a possible aetiological factor the father is much older than the mother and the domestic situation has been unhappy Her mentally-deficient step-sister is said to have frightened the patient repeatedly

sorts of twists and turns (a flight of ideas), he is side tracked and distracted by everything in his immediate environment, he puns and rhymes, chance associations lead him into other channels, and very often he fails to reach the goal of his ideas Kraepelin describes the above state as "the lack of inner unity in the course of ideas" It is only, however, when the excitement becomes intense that incoherence occurs, otherwise everything that the patient says can be followed and understood His letters cover page after page, he writes on all kinds of inappropriate paper, the detail is interminable inverted commas are freely used, the letters may be illustrated with drawings, are full of exaggerations, mis statements and false accusations There is often, however just that element of truth present which makes his statements and allegations difficult to refute The glibness, cleverness and facility of the patient often may convince those who have had no intimate dealings with him that he is a very ill used and poorly understood person I never have any hesitation in inviting such persons to look after the patient themselves

Another most pronounced feature is the great pressure of activity He is up early and late, fatigue seems never to be experienced, he does not hesitate to interfere in the affairs of others, is apt to undertake engagements and enterprises which he has no chance of accomplishing As a result of all this his own work and interests suffer, he cannot concentrate as formerly, but instead has a multiplicity of activities which seriously interfere with his efficiency His conduct may be said to lack perseverance and seriousness of purpose I have known a considerable number of patients so affected, who indulge in pilfering, and thus may require, temporarily, the care and protection of the police

The patient may be described as being off his guard completely his conversation, mood and activity are all dominated by his instincts more than by his common sense He may indulge too freely in wine and women, and it is often because of such habits that compulsory restraint has to be resorted to He dresses in style, exaggerates everything and totally lacks appreciation of the conspicuousness of his behaviour

The above description which emphasizes the elated mood, the over talkativeness with flight of ideas and distractibility, the pressure of activity occurs in a setting of clear consciousness The patient has a clear appreciation of time, place and those around him If anything his intellect seems sharpened, his reaction time is quicker, his wit more caustic, his analogies more apt, his memory more acute His memory is so acute both for remote and recent events that it becomes embarrassing to those responsible for his care and treatment if fault is found the rationalisations of the hypomanic are so glib and facile that they almost carry complete conviction

Usually there are no gross bizarre symptoms of the nature of hallucinations or delusions, but these cannot be ruled out The hypomanic has little or no

She was admitted on the 14th of January 1935 following a short period of restless activity during which she insisted on washing clothes on three successive days, when there was no necessity for doing so Following a Gospel meeting she returned home saying that she was converted was ecstatic said she was going to be married and announced in mysterious tones that the clock was going to stop She insisted on seeing and calling on the local minister elaborated the idea of her marriage named the local missionary as her husband announced that she was pregnant and that she was acquiring a home in which to live After entering hospital her elation continued unabated and was marked by flight of ideas and distractibility but the content of her thought was more or less limited to her ideas of marriage pregnancy and a house of her own There were times when she became much more restless excitable tore her clothes and was sleepless

In this case it may be noted that her maternal grandmother was unstable her father drank and was bad tempered The patient had been a popular clever girl who was sociable with others When 16 years old she had suffered from headaches curious feelings and stoppage of menstruation and a period of depression which gradually passed She had always been kept at home to help in the house work and to look after an invalid mother and an unstable maternal grandmother

Her psychosis may be looked on as a reaction to the difficulties of a drab family life the nature of the response was in harmony with her constitutional endowment The psychosis ran its usual course and terminated in full recovery

Hypomanic state of late onset in a man with strong constitutional traits The disorder occurred principally at a kinetic level Evidence of psychopathological mechanism

A business man 54 years old was admitted to hospital in a state of considerable excitement characterised principally by restlessness and over talkativeness with flight of ideas Answers to questions were described as literally bursting from his mind and were followed by a never-ending succession of ideas His conversation was accompanied by facial grimaces and bodily gesticulations designed to lend drama to his statements Because of the torrent of words following each question it was difficult to obtain a coherent history without always interrupting and leading the patient back to the point in question His mood was one of mild elation evidenced by his statements regarding his attainments at school and his general efficiency

His family history showed that his mother had died in a mental hospital as a result of cerebral hæmorrhage His father was a chronic alcoholic two of the patient s brothers had died as the result of drink and another brother had died when 52 years old from a seizure

Since admission to the Royal Edinburgh Hospital for Mental Disorders four months ago, she has shown some improvement Her great pressure of activity and elation and over talkativeness have subsided, but she continues to express most grandiose ideas regarding her future, is restless, has well marked flight of ideas and distractibility There has always been a strong erotic element so much so that she delights in slipping out of her room and hiding in some other part of the building, preferably on the male side, where she has alarmed several of the more elderly patients by getting into bed beside them When rebuked, she becomes rude and sarcastic and will never admit that she has been in any respect blameworthy She writes letters by the dozen, translates verses into bad French draws with little or no talent but withal she has a gaiety and infectious mischievous humour that will not be denied Then, there supervenes transitory episodes when she becomes irritable and may weep, accusing every one of lack of sympathy and cruelty A sample of her spontaneous talk is as follows "Damn — blast — don't put that down for Heaven s sake I am very religious I go to church and all that sort of thing and visit my friends graves Perhaps I am boring you but I must talk to someone Oh! for Heaven s sake, stop writing I am homesick My sister had a mastoid, but the surgeon pierced the brain she is not mentally deficient or anything like that, but she tells the time backwards" There has been no evidence of hallucinatory phenomena Her memory and intellectual faculties, her orientation and her general grasp are well retained She has much more realisation of her illness than she is willing to admit

This case illustrates many points already mentioned The family history records that her mother is hysterical and that a step sister is mentally defective On the other hand various exogenous psychogenic factors centring round the domestic situation are present which may have had considerable significance Her illness is much too acute to enable her to co operate in any adequate review of possible ætiological factors The present state of excitement and elation has been preceded by a previous depression, then a so-called lucid interval and now an excitement and elation

Her physique is of the pyknic type, but until her illness developed, her disposition was more of a deiristic than cyclothymic type, she had been imaginative and compensated for her relative failure at school by drifting into a state of make believe where her wildest dreams seemed to have a possibility of realisation

Hypomanic state quickly becoming more acute an example of a simple wish fulfilling mechanism

This patient is an unmarried girl 25 years old a domestic servant who was described as of a bright but domineering temperament

restraint parade in a nude state and indulge in sexual and alcoholic debauches There are times when their conduct becomes fantastic so that they decorate themselves in a conspicuous manner identify themselves with notabilities and titled personages and assume a position which is far removed from reality They show such a degree of talkativeness that the flight of ideas may merge into an incoherence but there is a quickness of retort and a flippancy and infectiousness which prevents the condition from being confused with any other They pun and rhyme are distractible humorsome and irritable in rapid succession and this conduct may become so unrestrained that they readily get into conflict with the other patients and nurses They do not hesitate to carry out dangerous assaults make attempts to effect their liberty are destructive to their personal belongings to the furnishings of the hospital to such an extent that the room frequently has to be stripped and the patient may have to be put in special garments They regress to a primitive level smear their excreta indulge in masturbation and behave with an unrestraint which is difficult to believe and appreciate until it has been actually seen Then the periods of irritability may pass away as if in a flash and be followed by a period when the patient will apologise for his conduct and be grateful for what has been done for him

There are few cases in which a certain clouding of consciousness does not occur It may not last for long perhaps only for an hour or two but during that time hallucinations and delusions may be expressed and for the time being the patient may have little realisation of time place or person The memory and intellectual faculties remain unimpaired During the acute phase there is no realisation of the seriousness of the condition but rather a feeling of great resentment because of what they believe is unjustified restraint

A case of acute mania with transitory depressive and hypomanic phases which has persisted over a period of 45 years with short normal intervals His psychosis may be considered as an over compensation for physical incapacity

A married man 63 years old was admitted in May 1934 to the Royal Edinburgh Hospital for Mental Disorders having been transferred from the Aberdeen Royal Mental Hospital where he had been since 1921 He was excited elated garrulous with rambling and exaggerated ideas of his capabilities as a poet and musician He had the reputation of constantly interfering and arguing with the other patients Following his admission he was very elated and talkative He slept little even with the aid of sedatives and generally he was restless and excitable He was diffuse and circumstantial When asked his name he not only gave it but added It is my baptismal name My pen name is Leslie Peverill When asked how old he was he not only gave his age to the exact number of months but added If you want to know where

The patient had been a high strung, excitable man, restless and over active, both socially and in business He always seemed to dominate any conversation no matter what it was about and seemed to have a ready association of ideas He played with his children, was keenly interested in the affairs of his friends and was the life and soul of any party The patient himself stated that, since childhood, activity was the most descriptive term which could be applied to him He had been particularly devoted to his mother, and his wife described him as having been his mother's right hand man The patient, however has been married for 32 years, and he and his wife have always been most companionable and friendly

For two years previous to admission to hospital he had been in a more erratic unstable condition, due to business difficulties and complications He became very dependent on his wife and family, and for a few months previous to admission he had insisted that someone should sit by his bedside at night before he went to sleep In order of preference he would call for his wife, then his daughter, then his son When the family rebelled, he insisted that he be allowed to sleep in the bed of one or other member of the family, but all except his wife refused On one occasion the patient forced his way into his son's bed but this merely resulted in his receiving a severe thrashing Just previous to admission, he passed through a period of depression during which he sat holding his head between his hands and complained of feeling tired and of lack of interest The above period was of a transitory nature and was superseded by a state of restless excitement with some element of tension

The clinical picture of a hypomanic state in a constitutionally predisposed person is obvious enough A point of interest is the late onset of an aggravated state necessitating mental hospital treatment Psychopathologically the devotion to his mother and his obvious dependence on wife and family point to a mother fixation which may partly have been a determining factor

Acute Mania — This condition may develop in various ways Usually there is a gradation from hypomania to acute mania but it may be ushered in by a transitory depressed state, or may start quite spontaneously and independently As the name implies it is a condition characterised by extreme excitement with boisterous elation, great talkativeness and intense restlessness The patient quickly becomes so noisy and unmanageable that mental hospital care is imperative His attitude and manner are over bearing, he laughs and talks in an uproarious and unrestrained manner, he brooks no interference, is arrogant and superior He has little time to eat or sleep, his mind is full of projects his activity and restlessness seem to be unceasing Such patients lose all sense of control and decorum they behave in the most impulsive way, may accost total strangers, tell libellous and scurrilous stories, are lacking in all moral

and often goes out of his way to annoy impulsive patients Sometimes this annoyance turns out badly for him because on occasions he has been struck by patients whom he was annoying

In his more acute phases he becomes highly excited and very grandiose progressively destructive and very deteriorated in his habits His language becomes abusive and obscene The hypomanic phase is one of mild irritability interfering and talkativeness he airs wishes and complaints which when appeased only give room for fresh desires He shows no deterioration of his intellectual faculties but he is so intensely argumentative unreliable and untrustworthy that permanent hospital care seems to be imperative so as to safeguard him and to give his relatives a moderate sense of security

Symptomatically the case is quite typical of the manic depressive psychosis but with a negative family history the congenital cataract may be considered as an important precipitating agent In his periods of acute excitement his conduct reverts to an extremely primitive level but even over the long period of 45 years no striking deterioration has occurred The case however exemplifies the poor prognosis attaching to cases starting in their teens

A single woman 46 years old who for the past 23 years has been subject to recurring periods of excitement and depression with intervening lucid intervals which in the process of time have become of increasingly short duration The psychosis exposes oral and anal sadistic tendencies There is also evidence of endocrine dysfunction

An unmarried woman 46 years old was admitted in April 1935 to the Royal Edinburgh Hospital for Mental Disorders in a state of violent excitement For a day or two previous to admission she had been stamping about the house slamming and banging doors If remonstrated with she became more furious and irritable was talkative and uncontrollable She insisted on leaving the house visited tenants in the top flat and purchased all sorts of useless articles in a friend s name She adorned herself in a fantastic manner and showed wild elation with punning rhyming and marked flight of ideas Following her admission she showed great pressure of activity she was never still grimaced and leered at the doctors paraded about the wards and made jocular remarks to any one who passed She was untidy and destructive She was clearly oriented for time and place There was no evidence of hallucinations or delusions She had a fair amount of insight

Physically she is a strikingly tall woman 6 feet 3¼ inches in height She is of a hirsute type having a masculine hair distribution

Her family history disclosed tainting with mental disorder through three generations The patient was a quaint child who was rather backward at school She was inclined to be influenced by others and to be dependent on

I live, it is 2 Buckingham Terrace, Dundee " The same sort of diffuseness was apparent in his answers to simple questions He was not content to answer to the point but always elaborated his answer to an unnecessary extent There was a tendency to marked flight of ideas

This patient s history is extremely interesting As a boy of 17 or 18 years old, he had an attack of depression, during which he tried to commit suicide by drinking 2 ounces of laudanum His action had been determined on account of the handicap of defective vision, due to congenital cataract He made a good recovery, but at the age of 20 he was admitted to a mental hospital and remained in a state of excitement for six years In 1904 a further period of excitement occurred necessitating six months' treatment In 1912 he was admitted to the Edinburgh Royal Mental Hospital and remained until 1913 when he was transferred to the Royal Mental Hospital, Glasgow He stated that he had asked for his transfer from Edinburgh to Glasgow, because he did not like one of the assistant matrons, who told him he was too patronising treating the other patients as though they were children He then complained about the climate and on that account was transferred to Sunnyside, Montrose where he remained until 19 1 He left Montrose because he had had a quarrel with the medical superintendent He became unpleasant and disagreeable and was transferred to the Crichton Royal Dumfries where he remained until 1924 His reason for leaving there was that he developed dropsy of the feet and that the climate did not suit him He was sent to Aberdeen where he remained for 10 years and ultimately left because he objected to certain practices which he alleged were contrary to ordinary humanity

He talks about himself and his capabilities, his eminent qualities as a poet and musician He has actually published songs, "A Christmas Carol ', a poem entitled Britons! Arise!" and Mrs Despard has published a poem of his in Freedom The note running through his poems is always of the high patriotic order such things as Pretoria Day ", "For the Right and other such titles He stated that he hoped to win the King s Medal for the best volume of selected poems He is a very well informed man with a most retentive memory, and there is no impairment of his intellectual faculties He has, however not very much appreciation of his condition He thinks that it is all due to his eye condition to Dupuytren s contracture of the fingers and to hemorrhoids

Regarding the future he would like to play the violin and offer his services as a musician If there were no openings in that line, he would be agreeable to travel as an agent for pianos and musical instruments

This patient therefore, shows a condition which has had a certain number of ups and downs but the manic features have always predominated He becomes depressed rarely, he is very troublesome, difficult, interferes with others

of a flight of ideas than of incoherence e g I saw you in Rutland Square doctor you deny it but you saw me It was Daphne — Mr P told me it was Cramond House I see Cramond House through the window — the first night I came here it was Bangour (another mental hospital) In addition she expressed bizarre ideas of persecution — that stuff is dropped in her food which goes to the doctor — the wireless was following me — there was a funny smell on my clothes as never before

Throughout her stay in hospital her mood showed a certain variation but it was essentially one of elation punctuated with episodes of irritability She habitually greeted the doctor in the morning by singing The march of the Cameron men (Cameron is the name of the house-physician) and sometimes as an alternative Here comes the bride She gradually regained her stability and explained her delusional state by saying that she must have been wandering in her mind and that she had been frightened of her husband

Manic phase of over one year's duration Elation with grandiose ideas over talkativeness and amorous behaviour have been predominant Numerous bizarre ideas of a symbolic nature She is of the masculine type

A single woman 40 years old of stout build whose family history is negative for nervous or mental disease The patient was an unusually precocious child being alert and intelligent beyond her years At the age of 4 she suffered from tuberculous cervical glands for which she had several operations At 16 she was said to have had pulmonary tuberculosis As a pupil at school she showed a marked capacity for art and on leaving school she went to the College of Art at the age of 19 Her work attracted great attention and it appeared that she had a promising career She was herself extremely ambitious and had a high opinion of her own abilities She led an active social life with her sisters and had considerable appreciation of literature being the main companion of a scholarly uncle The relations between the sisters appear to have been pleasant except in the case of a younger one of whose business abilities the patient was always jealous

At the age of 26 the patient accidentally destroyed a painting which she was producing for an art exhibition and competition Worry over this rendered her sleepless and in the course of a few days she became excitable and talkative and her behaviour was eventually disordered as she divested herself of her clothes and walked about the beach naked saying that she was the model of art She was admitted to the Murray Royal on this occasion where she remained for five months with a mild attack of mania On her discharge she was persuaded to give up her art career and she went into the office of her father who was a printer She disliked the work but achieved a tremendous amount in other directions going in for various arts and crafts reading house work

them She was never attracted to the opposite sex Her first mental illness occurred when she was 23 years old She became depressed, indecisive and suffered from incontinence of bladder and bowels The illness lasted for one month, but in subsequent years she had a return of depressive attacks with the same symptoms When 35 years old, attacks of elation developed, and until the present time there have been a number of alternating phases with longer or shorter normal or lucid intervals Latterly the intervals between the attacks have become shorter

During the depressive periods she takes to bed, refuses to eat and often refuses to speak The mood is characterised by great irritability and resentment The manic phases are periods of wild excitement and elation during which she exhibits all the typical phenomena but in addition shows a reversal to childish attitudes and ways, e g , lisping in her speech, playing with dolls, which is most striking

An unusually interesting case showing the close conjunction of manic-depressive to paranoid states

A married woman, 53 years old, was admitted to the Royal Edinburgh Hospital for Mental Disorders as a voluntary patient A sister had been an invalid for many years and was described as suspiciously minded The patient had been a healthy, affectionate child who developed normally and had been an efficient dressmaker and lady's maid She married, when she was over 40 years of age, a widower with one child, a daughter Her husband was a clever man rather sarcastic with a capacity for saying bitter things at her expense which infuriated her Gradually she became what her husband described as lazy and careless spent a great deal of time in bed and neglected her house work Such behaviour was looked upon as "cussedness" rather than as abnormality Her husband only began to consider her abnormal when one morning he found the fire lit, his boots polished and his breakfast ready He told her she must be ill Shortly afterwards she left the house, arrived in Edinburgh, busied herself with purchases and suddenly expressed the idea that her husband had put detectives on her track no doubt a projection of guilt feelings She became sleepless, restless flitted about from place to place, was constantly changing her mind She said she was being spoken about on the wireless that people were taking flash light photographs of her and named the person who was doing it She sat at the fire and spoke continuously as if she were broadcasting She wanted to consult her lawyer at 5 A M , insisted on leaving the house, lodged a complaint with the police visited a nephew and finished up in a boarding house

After admission to the hospital she seemed in a happy, elated state and talked continuously in a reminiscent, rambling manner much more in the nature

occupies a single room which she has made no effort to render personal in any way She tumbles out of bed in the morning and goes for a walk leaving her bed unmade The charge nurse describes her as being like a great tomboy

On mental examination she shows a generally increased activity In conversation she remains relevant and coherent but is voluble and distractible and is restlessly occupied with her hands as she speaks Her affect is one of elation but she is now capable of obvious disappointment at the postponement of her discharge Her main preoccupations are her plans for the future in which she envisages herself being a chess champion but speaks also of a return to her art and various other activities including the running of the home to the great comfort of her sisters She has however bizarre ideas of another fate in store for her The theme of these is that she is to be mated to the male of a lower species in order to produce spare parts for those individuals who have lost a limb I would like to produce cross breeds If you mate me with a female bull (sic) and see what results As a background to this delusion she speaks of her father having lost a limb by gangrene of an uncle having both limbs shot off in the War and of her studies in anatomy as a V A D when she was questioned as to the human heart and spoke of it as being between a rabbit and a sheep She states that an anti vivisectionist told her such things were done She speaks of her fate with proud resignation and then in a burst of confidence said on one occasion that she had never played the game the whole way with a man and she believed that suppressed interest in that would make her produce many children at once On another occasion she said I would like to be the first woman in the land — I was once in love with the Prince of Wales Many of her phantasies have been of a frank wish fulfilling nature There is no intellectual deterioration

The symbolism in the above passages can easily be explained in psychopathological terms but another interesting point would be the correlation of her virile attitude both anatomical and psychological to a disordered metabolism of the endocrine system

Delirious Mania — A considerable number of the cases who suffer from acute mania may have periods of delirious excitement but as a rule such periods are fleeting in character and poorly sustained There are however a group of cases comparatively few in number who from the very beginning of their illness pass into a wildly delirious state which may last for many weeks and often may end fatally The condition is characterised by clouding of consciousness so that the patient is completely oblivious (disorientated) of time place and those around him His conversation is a mere jumble of words his attention cannot be obtained but rather is his mind occupied by vivid hallucinations and terrifying delusions On the basis of his hallucinations or delu

chess, etc She was a chess player of a very high standard From time to time she worked herself to an excessive degree, and this was always a prelude to an attack of mania These attacks were not severe but were characterised by sleeplessness, restlessness, talkativeness and general euphoria with an enormous appetite In the attacks she was always more docile than in her normal periods In the twelve years between her first attack and her admission to the Royal Edinburgh Hospital for Mental Disorders she had six attacks of this nature The interval between tended on the whole to diminish and the attacks to increase in length Three years was the longest period for which she was free from an attack At the age of 37 she had for the first time an attack of depression, which lasted about two months During this attack she was almost mute, inactive and entirely lacking in initiative Since this attack she showed at various times a feeling that she had not lived up to her ambitions and was on the whole a failure

A year later she was admitted to the Royal Edinburgh Hospital for Mental Disorders in a state of mild mania, showing euphoria, psychomotor activity and a tendency to grandiose ideas She expressed herself as able to tackle anything Memory and intellectual faculties were retained and she had a moderate amount of insight into her condition The psychomotor activity subsided in the course of three months, although she continued to show a moderate degree of elation She was finally discharged at the end of six months, still showing mild elation with a tendency to talkativeness

Ten months later she again became over active and talkative, going out a great deal, inviting strange men to the house and holding various parties to inspect her paintings She became extravagant in her purchases and began to eat immoderately The attack had been precipitated by the death of an uncle and the selling of the family business After two months of care at home she was admitted to the Royal Edinburgh Hospital for Mental Disorders, as she developed very amorous features, throwing her arms round practically every man she met This attack has now lasted a year, and she is still moderately elated, talkative, amorous, slightly bizarre in her ideas

On physical examination the male characteristics are the most striking features She is of portly build and in her attitudes and gait suggests the male Her hair shows thinning over the forehead, the pubic hair is masculine in its distribution, and there is a growth of dark hair on the chest Fat shows a male distribution Menstruation has been regular but is slight and never inconveniences her In her sex life she has had numerous intimate affairs with men but in these, as in her amorous attitude in hospital, she has shown an activity and directness more characteristic of the male Her general interests show this same feature She enjoys reading and chess takes an interest in food and speaks of dinners she has had, the dishes and the wines In the ward she

frequently 'in the old days than they do to-day The old days need not necessarily go back further than the first ten years of the present century Certainly it is true of our mental hospitals in Scotland, or at least in certain parts of Scotland that we do not see anything like the number of acute excitements which occurred formerly Often I think acute delirious excitements were manufactured by excessive drugging and by injudicious management e g treatment in single rooms and padded rooms This point will be discussed later under the section on Treatment Bell in his description implies that the condition occurs more or less de novo that it is not of toxic or infectious origin and that recurrence need not occur

Henderson and Gillespie have reported a case but they had no difficulty in aligning it with the manic depressive psychosis The following case would seem to strengthen the manic-depressive bond

Delirious excitement on two occasions with interval of 1 years Recovery in each instance in 6-8 weeks' time Condition characterised by tempestuous behaviour with disorientation hallucinations delusions of being spied on Family history showed a strong manic depressive trend

The patient has been admitted on two occasions to the Royal Edinburgh Hospital for Mental Disorders His first admission occurred when he was 24 years old On that occasion he was described as incoherent in conversation, exhibited meaningless movements, tore his clothing, at times was so violent that he assaulted the attendants He soiled his bedding He was disoriented for time and place He appeared to be hallucinating said that he was receiving wireless messages from the birds and also by Morse code His conversation was entirely disjointed so that only occasional words and phrases could be understood e g Whiskey and soda Toddy ' and scattered references to sport politics and Sir Walter Scott He was particularly noisy at meal times and could only be fed with difficulty He accused his attendant of being a spy He had a peculiar dislike for glass and was successful in breaking electric bulbs windows and ornaments on various occasions If food was presented to him which he did not like he would throw it out of the window, crockery and all

In the course of a month his excitement subsided and two months after admission he was discharged as recovered

He was readmitted in 1935 twenty-one years after his first attack Previous to the development of his acute symptoms he had for 24 hours a period of agitation and indecision This was followed by disjointed speech when he uttered such phrases as What s being done about stopping the world? These are events that happened years ago Then an acute delirious phase developed during which he lay on his back in bed from which he had tossed the bed-clothes He drew up his legs and then violently straightened them out

sions, his conduct consists of wild impulsive outbursts or even of threatening and murderous attacks on those who may be in attendance Restraint is thrown to the winds, man becomes again a child of nature and regresses to the most primitive and archaic levels The tongue becomes dry and foul sordes collect on the teeth and lips, rapid exhaustion and emaciation occur and artificial feeding has to be resorted to in order to save the patient's life There may be no clear evidence of any toxic, infectious or exhausting factor Such cases were described by Luther Bell in 1849 and were known as Bell s mania They were also named (1) typhomania, (2) acute delirious mania, (3) delirium grave, (4) collapse delirium Kraines has given an excellent review of this group of cases and suggests that for the convenience of study they should continue to be named cases of Bell s mania

The presenting syndrome is one of sudden onset with over activity, great excitement, sleeplessness, apparent delirium and distorted ideas without any clear evidence of a definite toxic infectious factor Kraines gives a quotation from Bell s original observation from which the following may be extracted "The patient will get so little food, so little sleep and be exercised with such constant anxiety and restlessness that he will fall off from day to day The emaciation goes on with a rapidity unexampled in cases of mania, or fever, or delirium tremens At the expiration of two or three weeks your patient will sink in death, diarrhœa occasionally supervening a few days previously On the other hand, if the tendency is favourable convalescence is established in about the same period, and the sufferer emerges into a state of absolute recovery at once as he would do in the delirium of any acute disease Nor are there any of the general consequences such as attend mania, as melancholy or impairment of mental integrity The cure is permanant as well as complete" Altogether Bell described a series of eleven cases Kraines reports the case of a young woman, 24 years old who following a period of over work became sleepless and two days previous to her admission to hospital, had a vision in which she appeared to be dying, God appeared and told her she would marry a boy she had known in her childhood that this boy would die and leave her pregnant with a son Gradually her excitement became more intense, she was hallucinated and deluded seemed clouded, was incontinent and so sleepless that she did not respond satisfactorily even to large quantities of various hypnotics Her over activity was so intense that attempts were made to restrain her but these did not meet with much success On one occasion her temperature rose to 104 6° F

After thirteen days her excitement began to subside, and in six weeks after admission she was described as free from abnormal symptoms

The above-described syndrome is extremely interesting Such cases occur, but I am going to put forward the suggestion that they occurred much more

nating with hypomanic and manic phases verging on delirium Auditory and visual hallucinations along with delusions have been prominent features

The patient is an unmarried man now 37 years old whose psychotic history started in 1916

Family History — There is a strong constitutional predisposition to affective disorders on both sides of the family His father was a domineering successful business man One paternal uncle was cyclothymic a second was described as hale and hearty and of a roving disposition a third suffers from high blood pressure and has had several strokes One paternal cousin was insane and another was described as having a roving disposition His mother had a cyclothymic disposition and died at the age of 46 years from a cerebral hemorrhage One maternal aunt was a crank a second was constantly quarrelling with her husband a third was extremely excitable and difficult to live with a maternal uncle was always off the rails as regards money

Of the patient s siblings one has a dominating personality and is well exteriorised another is efficient at her work but suffers from mood swings

Personal History — The patient was a healthy child who developed normally He was extremely sociable and popular and excelled both in his school work and at games He was excitable and high strung so that on occasions during his boyhood he and his father would roar at each other

His psychotic history began in 1916 when he was 18 years old On that occasion he suffered from a state of depression a lack of energy and a dislike of his fellow men which was most unusual After three months he made a good recovery and in 1917 proceeded over seas with his regiment to France On his first day in the trenches he exposed himself unnecessarily to gunfire and then seeing two dead Jocks lying tangled up in barbed wire he commandeered a shovel and having secured their identity discs and personal knick knacks he buried them The following day when accused wrongly by a superior officer of having deserted his men he became incensed almost struck him but contented himself by remarking that it was bloody lucky that he had three pips to my one A week later he was again in trouble He had developed a septic hand but when he thought it was sufficiently healed he left hospital on his own account and rejoined his unit The following day he was handed a document by the adjutant which read We do not wish to say that the undermentioned officer is insane but we think he should be placed under observation His commanding officer reports firstly he appeared up the line without movement orders secondly he appeared in the mess with no shirt on thirdly he went up the lines clothed in a shirt and water bottle

His hypomanic state described above continued and led him into many exciting adventures which brought him into conflict with those in authority so that he was threatened with arrest Then following a period of sleeplessness he

while at the same time he carried out rotating movements of hands and arms as if turning a large steering wheel in an anti clockwise direction He spoke loudly as if addressing a meeting in a large hall, he talked of a vague electrical experiment A sample of his speech was as follows "The wires are merely red hot I m an electrical machine — can t you see if you touch me I may explode? The wires are torn up all over the country Hullo, hullo, is that Edinburgh? There s the Dean Bridge — there they go up and down — if you keep interrupting with silly questions you will spoil the experiment — like uncles and aunts always interfere and spoil the experiments of the children' While talking, he jumped suddenly from bed, was extremely violent and threatening and became so unmanageable that he required an injection of hyoscine and morphin

For the next four days his conduct continued at a tempestuous level His temperature rose to 100 8° F, his tongue became dry and furred, and he looked extremely ill Then gradually his acute symptoms subsided, but for several days he continued to talk in disjointed sentences and referred constantly to the power of electricity, e g, 'If I want anything done I know there are electrical forces that can do it" He stated that he kept rubbing his hands so as to neutralise some electrical power

In six weeks' time he had made a good recovery with insight into his previously disordered state

His family history showed that both his mother and his brother had had typical manic depressive attacks The patient had been a healthy but rather sensitive man who, following recovery from his first illness, joined the Army and served with great credit as an officer on active service throughout the War years Latterly, he has occupied a distinguished business position and has been extremely efficient He has always had to struggle against strong homosexual tendencies

The clinical picture gives a clear indication of psycho pathological trends, which in conjunction with his manic depressive disposition may have been the important determining factors of his breakdown There is ample evidence of both oral and anal sadistic elements plus a conscious conflict over his homosexual tendencies He temporarily, in his delirium solves his conflicts at the expense of his reason

Before describing the other clinical types of the affective disorders, a case record is submitted which shows so well the varying phases of the manic depressive disorder that it has been thought advisable to present it in considerable detail

Alternating manic-depressive state persisting for 20 years without any signs of deterioration The condition has been characterised by depressive phases alter

plans inclined to be irritable when crossed When superseded by acute symptoms he becomes entirely irresponsible attempts to escape is violent proposes marriage indiscriminately and requires to be supervised by special male nurses In the more acute and intense phases no matter whether excited or depressed he becomes subject to hallucinations and delusions e g Now I began to get curious fancies during the day The whistles of trains the colour and shape of clouds seemed to me to convey what I thought of as long-distance messages from some one unknown to me One afternoon I was distinctly told to follow red everything in red I followed moving or stationary Colours too were in some way very closely connected with numbers

On one occasion while in town with his special attendant he gave the attendant the slip and the following is his own account of subsequent incidents 'The idea gripped me that Professor R was waiting to do some sort of experiment on me All the time I was conscious of shouting literally at the pitch of my voice I think in terror Afterwards for fully a fortnight I was totally unconscious either of my feelings or surroundings The strongly scented liquids (in the occupational department) used by others were I thought poison to be used to put an end to me The nights were the most unbearable part They abounded with the most vivid nightmares of all descriptions and I would wake and lie terrified soaked in a drenching cold sweat of fear I began to hear voices I credited George (an attendant) with secret and unearthly powers I seemed to have offended him in some way for he warned me that in virtue of his masonic powers he was more than a match for me and could make it hot for me One night it seemed that the voices were those of my family reproaching me with soft living They insisted that what I needed was a good scrap So vivid were the impressions that I got up and went across to old Jock who was in the room with me gave him a warning then seized him by the hair We set to Another patient arrived with an empty tin jerry in his hand he clouted us over the head with it and I was taken upstairs

Throughout his prolonged illness his intellectual faculties have been maintained at an excellent pitch and there is no indication of any serious disorganisation or deterioration of his personality

Chronic Mania

The concept of chronic mania has been a gradually changing one The older writers of whom I may take Clouston as an example believed chronic mania to be the aftermath of acute mania which had not resolved Any case of acute mania which had not recovered in the course of twelve months came to be designated chronic Thus of course was a very arbitrary method of deciding when one condition lapsed into the other and a very misleading one too

became miserably depressed and came home on leave A train load of soldiers was put under his charge, but all he remembered was that he got them half way to the base and then remembered nothing of the rest of the journey On arriving home he developed a haunting fear that the draft was irretrievably lost He also felt that he had deserted About this time an article appeared in "John Bull ' termed ' Shot at dawn , and this so preyed on his mind that he thought he would be court martialled and shot as a deserter If he happened to see anyone with his own divisional badge, he felt terrified and ran away as hard as he could He was never able to return on active service

In five months his depression had passed and was followed by a hypomanic state during which he left his regiment without leave and eventually was placed under close arrest but eventually was transferred to a military hospital for those nervously or mentally ill In September, 1918 he was invalided out of the Army as 'permanently unfit

In April, 1919 he was again depressed and now began to hear voices and also seemed to see people who were dead It seemed as if there were trap doors in the garden through which people could come and go

In June, 1919 he was sleeping badly, he had terrifying nightmares and during the day people he knew well seemed to take on the semblance of notorious characters It was at this time that the Landru murders were occurring in France and the newspaper "The Scotsman ' stated that Landru might be in Scotland He developed the belief that his uncle was Landru He had the firm belief that some of the meals he took would be his last on earth Later in the same year he was taken for further treatment to a military hospital He continued to be suspicious and hallucinated He took a violent dislike to one of his fellow patients and heard voices urging him to push him into the reservoir because he was the German Crown Prince

Gradually all the above symptoms disappeared completely, but in January 1920 he commenced to drink a lot, frequented dances and was in an elated exhilarated state His behaviour became thoroughly irresponsible, he travelled all over the country and eventually reached London, where he drew certain arrears of pension and proceeded to have a good time In the course of a day or two newspapers appeared with the headline "Actress pursued by Madman and related how he had called on a prominent actress When admission to the lady was refused he produced a revolver Other adventures of a violent nature followed Since that time, he has been more or less constantly under mental hospital care Periods of depression and inactivity alternate with hypomanic and manic phases which reach an extreme degree

During the depressed phase he is a quiet, reserved man who answers politely and has an excellent realisation of the illness from which he suffers In his hypomanic state he is restless, over active talkative, full of schemes and

stereotypes in attitude and movement untidiness and destructiveness without marked excitement confusion insight pronounced or permanent feeling of ill ness fixed or systematised delusions energetic wish to leave silly euphoria behaviour influenced to a pronounced degree by *isolated hallucinations or de lusions*

The above description takes us back to the days of symptomatic diagnosis and should *not* be taken too seriously *Neither symptoms nor cases can be* divided so easily into clinical groupings but at the same time Schott s effort at clinical distinction was meritorious

In 1906 Wernicke stated that in his opinion chronic mania was a separate *condition* and that *acute mania never developed into chronic mania* The course of the chronic manic is at a much less acute level Wernicke s obser vations are however based on one patient and on this account are not par ticularly valid

Von Hosslin in 1909 expressed the *opinion that chronic incurable forms of* manic-depressive psychoses developed from the more acute conditions but that they did not show any defect state unless senility or arterio sclerosis was pres ent It is to be noted that Von Hosslin s patients were all over the age of 40 years

Nitsche in 1910 made a further valuable contribution to the elucidation of chronic manias and enumerated a number of general characteristics reduc tion of motor excitement querulant shades of mood the predominance of grandiose ideas over persecutory ideas in case of *delusion formation* absence of systematisation of delusions dependence of content on fluctuations of affect variation in intensity of the manic symptoms frequently positive family his tory *In order to make the above points clearer* he drew up four groups 1 A hypomanic state with *mild fluctuations* in the intensity *of the phenomena* beginning in youth (original hypomania) 2 Those of sanguine tempera ment who at about the age of fifty show a hypomanic psychosis which may develop into a manic state and become *chronic* (progressive manic constitution) 3 A long hypomanic phase *in* a circular manic-depressive *psychosis* (circular chronic hypomania) 4 Cases of constitutional excitement

In the writer s opinion Nitsche s differentiation is too finely drawn It is a practical impossibility to carry it out The cases *comprising* group two are perhaps the nearest approach *to the writer s conception of those cases which* can be called chronic mania

In 1921 Laignel Lavastine and Vinchon accepted chronic mania as a sepa rate entity The excitement was one of long duration accompanied by delu sional ideas *of an imaginative nature* but with astonishing *integrity of the* intellectual functions even after a period of twenty years From a study of eight cases Hamel and Vernet who subscribed to the views of Laignel

as it is well known that we cannot put a time limit on any case as to the prospect of recovery I have seen many cases of manic excitement, which have lasted for considerably longer than a year before recovery was effected so that if any differentiation between chronic mania and other forms of mania is going to be profitable or advisable we must have an entirely different basis from that which was postulated by Clouston

Henderson and Gillespie presented the case records of four patients who had suffered from states of excitement of a manic nature, which had persisted uninterruptedly for a long number of years From these cases and from a study of the literature they expressed the view that the term chronic mania, should be reserved for those cases showing manic excitements which had started at the age of 40 years or thereabouts They came to this conclusion largely on prognostic grounds because in their experience cases of this kind had an infinitely more serious outlook than the manic states of earlier life

Since then Wertham has published an excellent review of the whole subject to which I am much indebted for the subsequent remarks He refers to Siefert's publication in 1902 Concerning chronic mania', in which the case of a man who had been in a mild excitement for many years is described The patient had had a constitutional hypomanic temperament, and his prolonged psychosis was only a continuity of the constitutional state It seems obvious enough that this case should be ruled out of the series which is under consideration

Jung in 1904 noted that hypomanic patients frequently developed antisocial behaviour and continued in such a way indefinitely He preferred for such cases the use of the term "manic dysthymia to "chronic mania ', which he considered a graver and more serious affection Schott in 1904 brings us on to much more definite ground He reported four cases, all of whom had exhibited a state of severe manic excitement persisting for thirty, twenty five twenty one and seventeen years respectively All of Schott's cases had had previous manic attacks and there was nothing in the persistent attack to differentiate it from the others, except that recovery did not take place He pointed out that there might be considerable difficulty in differentiating such conditions from schizophrenia but in his clinical description he compiled a group of positive symptoms which must be present and a group of negative ones which are absent

"The positive symptoms are good apperception and observation mental productivity continuously elated mood, pressure of activity, good memory and retention spontaneity and interest dulling of affectivity weakness of volition, over-estimation of self, mental weakness especially in the sphere of judgment, the patient s lack of critique in regard to himself and his efficiency, capability of vivid responses The negative symptoms are depressive or inhibited states,

Case 6 A married man 60 years old suffered from chronic mania excitement of five years duration ending in recovery After two years a second one occurred which had persisted for two years at time of reporting On both occasions the clinical picture was identical over activity elation flight of ideas and non systematised delusional ideas

Case 7 A young man 7 years old who exhibited a chronic manic excitement of 7 years duration which was continuing at the time the case was reported He had a manic depressive ancestry and he himself had suffered from three previous attacks of elation and one of depression The course of his illness is described as fluctuating outspoken manic periods alternating with periods of depression

In commenting on his cases Wertham is inclined to believe that after the illness has been considerably prolonged three changes tend to occur (*a*) a tendency to fluctuations with relatively quieter periods intervening (*b*) reduced over activity and intellectual productivity with a tendency to stereotypy (*c*) transient delusional ideas indicative of a intellectual weakening His cases have led him to postulate the idea that the majority if not all of the patients have what he terms a psychobiological rigidity in conjunction with a manic constitution The three factors which conduce to this rigidity are (*a*) the age factor (*b*) a characterological rigidity in the pre morbid personality (*c*) a pronounced reduction of intelligence

The situation then is a very interesting one and it would seem that there is ample evidence to justify the formation of a group of manic excitements a group which has as its converse the so called *involutional* melancholic states It is not wise at this stage to elaborate the position too much but as a further contribution short notes are appended of another group of cases which supplement those which have been mentioned

Chronic mania An excited noisy elated state with over talkativeness distractibility and obscenity Angry episodes are frequent Paucity of ideation but a caustic wit A persistent hallucinosis with grandiose delusions principally erotic Ten years duration

A single woman 49 years old was admitted to the Royal Edinburgh Hospital for Mental Disorders in May 1925 in an excited angry noisy state She waved her arms about emphasised her remarks by nods grimaces and vigorous movements of the head She was elated and in her manner and talk was imperious domineering and abusive Her language was obscene She was mischievous and interfering with the other patients By the end of two years three main phases were apparent Most commonly she was shouting and abusive filthy in her language and liable to strike out at all and sundry On other occasions she was haughty and imperious expressing grandiose ideas and

Lavastine drew up certain criteria 1 Onset at ripe age with definite predominance in women 2 General symptoms of mania in mitigated form a Mild psychomotor excitement b Intellectual excitement more pronounced of hypomanic type, and continued despite periods of mitigation and exacerbation c Habitual euphoria 3 Conservation of affective responses, more or less altered or deviating 4 Absence of intellectual weakness 5 Frequent presence of non systematised, unstable delusional ideas, constituting periodically real delusional flurries

Wertham s personal contribution consists of the report of seven cases of prolonged manic excitement with durations of from five to eleven years The cases are of extreme interest and should be studied in detail, but for the purposes of this contribution, only the salient features can be noted

Case 1 A man 58 years old, who had never suffered from any previous attacks showed a state of chronic manic excitement which persisted for twelve years His condition was characterised by over talkativeness with much circumstantiality, restlessness and buoyant mood He expressed numerous grandiose delusions The condition was considered as similar to the 'progressive manic constitution ' states described by Nitsche

Case 2 A single woman, 37 years old, who had never experienced a previous attack showed a manic excitement which persisted for six and a half years "For a considerable time ' previous to the onset of her psychosis she appears to have passed through a depressive phase On admission to hospital she was elated, restless, showed a flight of ideas Her illness was punctuated with much quieter intervals but for the most part she was irritable, impulsive and talked of hallucinatory experiences of a panoramic character

Case 3 A single man 46 years old, who had had several previous attacks of excitement There is some evidence to show that he may have had a transitory depression when 23 years old His first manic attack was at the age of 29 years On two occasions the manic excitement was of six years' duration

Case 4 A single woman 51 years old, who had suffered from a state of chronic manic excitement for more than seven years She had had five previous attacks, the first of which occurred at the age of 14 years The onset of the chronic attack was at 51 years of age She was elated, over active talkative and used stereotyped expressons There were exacerbations of violence and "a suggestion of paranoid ideas in a jocular setting In between times she had transitory depressive periods

Case 5 A married man 52 years old had a manic excitement of five years duration ending in recovery There was no history of any previous attacks Four years later, however a similar attack of one year's duration was followed by recovery There was elation over activity, angry episodes and the expression of paranoid delusions which were not elaborated

state characterised by noisy excitement with elation grandiose delusions hyper activity and obscene talk No deterioration of intellectual functions Good in sight

A married woman 44 years old was admitted to the Royal Edinburgh Hospital for Mental Disorders in 1919 in an emaciated state with a marked tachycardia She was depressed resentful believed that the people about her were little dogs that the doctor was a fish that everything about her was foul She required to be tube fed and attempted to bite and scratch when she was being attended to Towards her own family she was virulent aggressive and obscene Two years after admission she was described as being in a chronic state of sulky resentful mild excitement was hallucinated and delusional Since 1924 she had been much more wild noisy abusive obscene and elated She was described as filthy in her habits and malevolent in her attacks on others Occasionally she was affable addressing those about her as Lady this and Lord that Subsequently she expressed the idea that she was God or God of Gods

In 1935 her condition is more or less unchanged To the matron s Good morning she responds with A bad morning to you She is in constant activity sits up in bed arranges or counts the blankets or sallies out into the garden where she probes about among the flowers and catches bees squeezing them to death in her hands She counts everything knows the number of panes in the windows bricks in the wall grapes on a bunch or even petals and twigs on a bunch of flowers Her affect varies from elation to a state of noisy excitement but with it all there is a good humour and playfulness about her of a decidedly infectious character

Her memory and intellectual functions show no deterioration whatsoever In fact she comes up to a very high level and has good insight into her con dition

Her family history is negative for nervous or mental illness The patient was a bright happy cheerful girl never robust and always nervous She was a clever woman She married at the age of 23 years Her husband described her as highly strung sensitive easily hurt but of a most lovable and generous disposition Her marriage was happy and there were six children When 39 years old she developed symptoms of Graves s disease but with treatment she recovered except for a persistent tachycardia For several months previous to admission she had periods of extreme depression and bursts of great energy One evening she complained of something having snapped in her brain became more depressed expressed delusions of poverty and finally would not speak or eat It was on account of these symptoms that admission to a mental hospital became imperative

commanding the attention of the staff with the utmost condescension In her most affable phases she was humorous, elated and witty, cracking jokes of a risque character and laughing heartily at those times On occasions she would tear her clothing to shreds and decorate herself grotesquely with bows in her hair or round her wrists At other times, when told that she was not able or well enough to return home, she would bang her head against the wall She suffered constantly from auditory and visual hallucinations

As she is at present, 10 years after admission, she is a gaunt erect figure grotesquely dressed in a red dressing gown and with numerous gaudy bows She greets the physician either with a stately bow and condescending smile, or else with an angry harangue, thumping her fists on the bed for emphasis There is considerable distractibility and pressure of speech and activity, but there is a paucity of ideation and a monotony of expression, as if her thought processes were in fixed grooves She displays a caustic wit "You are not able to write Give me a clean page You are Dr Cameron (an assistant physician), but you are not a doctor — if I had a son like you, I would drown myself but first I would shoot the man — I see a vision — very fine — you are insane — I never met any one worse — These bloody men — I loathe them — I loathe men"

Her mood is consistently one of elation or anger She believes that she should now leave the hospital as everyone else, including the staff, is mad She tends to sentimental phantasy and self dramatisation 'This is the end of the world — I have lost my husband — he has been murdered — a dreadful thing jealousy — (When did you marry him?) — When he married me — This is the sad part of my life — I have lost him She also expresses other delusions of a grandiose nature supported by visual and auditory hallucinations mainly of a religious or erotic nature "I am Miss Constable (fictitious name) — I communicate with God, with men never — He shall have no share in my Kingdom — God is with me — I hear him speak to me — I see a vision'

Her memory and her intellectual faculties have become blurred but there is no great deterioration and she has wonderfully good insight into her condition

We have no information regarding her family history As a child she suffered from earache with consequent deafness and this may have determined an irritable sensitive disposition with episodes of bad temper When 42 years old seven years previous to admission she was run down in her general health and irritable and was treated in a nursing home for two months but there are not enough facts to determine whether or not she was suffering from depression

Chronic Mania A case of 16 years' duration Manic symptoms were preceded by a depressive phase in which delusions of poverty, mutism and refusal of food were prominent symptoms In earlier life, symptoms of Grave's disease Manic

attack now of eight years duration The symptoms exhibited have been of the classical type No intellectual deterioration

A married man 41 years old a schoolmaster was admitted in October 1914 to the Royal Edinburgh Hospital for Mental Disorders There was a history of mental disorder in several collateral relatives The patient had been an excitable high strung man but efficient and a good schoolmaster The onset was rapid He became excited and suspicious said spies were following him and consulted his lawyer His condition rapidly became so aggravated that he required to be certified On admission he was restless talkative and domineering He talked incessantly constantly appealed to God and the devil His attention was difficult to engage His excitement rapidly subsided and in two months he had made a good recovery

In June 1916 following a short preceding phase of depression he developed a manic attack which persisted for six years and was followed by another transitory depressive phase

Four years later in 19 7 while on a walking tour on the Continent he suddenly developed manic symptoms and represented himself as a Scottish millionaire His condition was so acute that he was admitted to a mental hospital On being returned to Scotland he insisted upon kissing all the nurses and also the matron s hand with elaborate ceremony He talked incessantly about his deeds of derring do and swore with great fluency in French and German On the journey to Scotland ten rolls of ham were provided for the patient and his attendant but the patient consumed them all at one sitting For 20 out of the 26 hours of journey he talked without stopping and for the other 6 he slept after having been given barbital (veronal)

Following his admission he continued in an elated self satisfied mood was thoroughly contemptuous of others and had a great tendency to decorate himself Has always been officious and interfering He is excessively self assertive and attempts to dominate the other patients If crossed he becomes hostile and abusive and uses obscene language He has no sense of shame and attempts to flirt and shock the female members of the staff His talk shows a very marked flight of ideas and he is distractible

His memory is described as circumstantial so that he remembers every small detail He says he knows the answer to infinity can raise the dead but this type of idea constantly changes On one occasion he said religion was all nonsense and he would tell God to go to hell and a typical example of his mental processes is afforded by his justification of this by saying that his reason for the statement was that God was needed most in hell

During 19 9 he remained manic except for a short period of depression Since 19 3 following an attack of influenza he has continued in a maniacal condition His powers he thinks are supernatural he can control others by

Chronic Mania An elated over talkative restless state with periods of angry irritability Cyclothymic family history, the illness a compensation phenomenon in relation to physical ill health and a fall in family fortune Duration of 22 years

A single woman, 59 years old, was admitted to the Royal Edinburgh Mental Hospital in 1930 having been under care in another mental hospital for a period of 15 years She comes from a high strung cyclothymic stock In her youth the family circumstances became greatly reduced, and this was a great blow, as there had been intense family pride It was in an atmosphere of hardship and ambition that the patient grew up She was delicate and fragile She suffered from anæmia and repeated 'chills" She was exceptionally bright and successful, had a generous nature but quick tempered and outspoken to an unusual degree On leaving school, she occupied herself in domestic duties and worked unremittingly for the welfare of the family Although serious-minded and conscientious yet she had a keen sense of humour and enjoyed a hearty laugh She suffered from physical ill health due to stomach trouble and in relation thereto had periods of transitory depression

When 37 years old, three months after the marriage of an older brother she began to complain that she had been badly used, said that her brother had no right to leave home and that she was going "to give it to him She made herself particularly disagreeable to her brother s wife Her condition became increasingly difficult, she was provocative irritable, quick in response and apt in repartee She was tried in a nursing home, but while there she adopted a haughty attitude to the nurses was so restless and excitable that she refused to stay and was admitted to a mental hospital She has been continuously under mental hospital care ever since She was described as good humoured but dominating and interfering managed everybody else's affairs and 'queened it She was transferred in 1930 to the Royal Edinburgh Hospital for Mental Disorders She was in an elated talkative and egotistical state doing her best to monopolise the attention of the doctor Her good humour is punctuated by angry outbursts during which she is abusive and threatening but if treated with consideration she becomes confidential and friendly and is on the whole, easily manageable She frequently struts about the ward, pays keen attention to the conduct of the nurses, and jeers and laughs uproariously, if she can find anything to criticise She occasionally shows a flight of ideas puns and is distractible There has been no evidence of hallucinations and no delusions Her memory is accurate, and her general intelligence unimpaired She has a fair degree of insight into her disordered state

Chronic Mania (?) Transitory manic phase in 1914 of two months' duration Two years later manic attack persisting for six years Four years later manic

attack now of eight years duration The symptoms exhibited have been of the classical type No intellectual deterioration

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During 1929 he remained manic except for a short period of depression Since 1933 following an attack of influenza he has continued in a maniacal condition His powers he thinks are supernatural he can control others by

telepathy, can end war by transmission of ideas At times he talks in obscene and blasphemous language in his self chosen rôle of Satan and shouts and rages in a most theatrical way at the doctors, at the hospital and at his detention The next day he will be in perfectly good humour and in his role of pedagogue will fire off a stream of questions to test the doctor s literacy

The following is the contents of a letter written by patient ' All goes well in the best of all possible worlds EGO et DEUS as MACDONALD said to me this morning Buy a sixpenny BLNN book on BUDDAISM I am a convert to a new Catholic variety of Kapurism Am learned in the esoteric arts *Seriously*, Jessie, you should take up the study of German — any Scotch lassie can learn 'Schlafe, mein Liebling

' Tell Elsie to go out charing or make selections from Gladys Kooper s ASH PIT Are there no SKIVVIE'S JOBS in Venusberg? I have been weeping and whaling and gnashing my teeth all afternoon, becos of the SORROWS OF SATAN (*DIAGRAM*) This is the new MORTUARY AT WARRISTON where I am to be interned on Sunday R I P Your daft laddie, Jock"

Chronic manic state occurring in a paranoid personality An over compensatory state following on an unfortunate financial speculation

An unmarried man, 52 years old, was admitted on July 17, 1916 He talked incessantly, said that people were going to murder him, and that he would retaliate, was certain that if he were in Berlin, he would be able to effect peace He had been wandering about at night for the past three weeks, was a constant worry to his friends and gave them no peace He had left Orkney when quite a young man and went to London where for 20 years he worked in employment, proved himself a valuable servant and saved a considerable amount of money Unfortunately he lost a part of his money in an unlucky speculation, and this upset him so much that he became melancholic His firm offered him six months' holiday but he preferred to take the equivalent money, and when he had saved, he started a shop of his own He became interested in local affairs and passed from interest to excitement, speaking, writing and inciting the public interest and indignation continually He began to think that his former firm had defrauded him and went to London to denounce them and extract damages Finally he threatened personal violence against a member of the firm Next he tried to stand for Parliament Finally he took to spying on the movements of naval officers ashore on leave accused them of being spies and made himself a terrible nuisance It was following this conduct that he was certified

A letter from one of the partners of the firm where he was employed stated that he had been a worthy fellow in every way He lead a lonely life, made no friends was secretive about his private affairs and careful in money matters The unfortunate speculation preyed upon his mind and affected his health

After returning to Orkney, he spoke at public meetings wrote to the Press lost his mental balance made wild journeys to town to interview members of Parliament, told his friends that he was preparing to contest a seat at the next election His statements were so libellous that finally he was sued for damages by a local man and most of his money was lost in costs and damages and he had to meet his creditors Then he took to letter writing demanded satisfaction with menaces for imaginary grievances thus proving to his friends that he was rapidly losing his mind At the time of his admission he was in an excitable state spoke much of the Orkney Islands denounced the Naval Officers and said they spent most of their time trout fishing and so did not look after the German mines

Following his admission patient continued to be elated and talkative He discussed fluently and amiably his life in the Orkney Isles He asserted that he would claim damages because of loss to his business following his detention here He wrote long letters and it was difficult to separate his sane and his insane ideas they were so subtly blended After a few months he was able to be put on parole It seemed that he had forgotten many of his extraordinary ideas He ceased talking about his plans for managing the Navy or of his revengeful schemes He is described as being a pleasant and intelligent man He was however subject to a certain amount of change, because it is reported that on one occasion he behaved foolishly in the garden, demanding an interview with the Lord Provost and finally finished up by fighting one of the attendants in the hospital kitchen

In 1924 it was noticed that he was abusive and denunciatory and said Professor Robertson was a criminal To any one who spoke to him he said ' I am your superior I refuse to be an Orkney pauper I was born in holy wed lock and sprinkled ' His delusions are described as a mixture of persecutory and grandiose ideas He collected rubbish made false accusations saying that everybody were thieves and blackguards

In 19 6 he escaped was brought back by the Leith police During the time he was away he had journeyed through East Lothian visiting all sorts of places His condition has continued in very much the same way for the past few years He was still determined to run away harangued about his heritage said he was descended from the Vikings and was therefore greater than any Britisher He denounced King George as a pauper and spoke of Prof Robertson and all Orcadian officials in the most insulting way

A recent report states that the patient walks up and down the ward with a self important air declaiming stereotyped phrases such as — Kirkwall is a more ancient city than Edinburgh or To hell and everlasting damnation He is most accurate in his replies to questions For instance when asked his age he gave it as 72 years and 2 months and 4 days giving also the exact time

he had been in West House He does not show any flight of ideas, but talks incessantly and in a grandiose strain

He described himself as the Oyster King of Orkney He says he always pays 20/- in the pound and believes that he will eventually become triumphant

His mood is described as elated and trends of thought are mainly of a paranoid nature, showing both a general grievance against mankind and an over valuation of the ego He appears to be living on the remnants of his ideation of twenty years ago His history indicates that he has had depressive and manic phases, but that they occur in a paranoid personality Gradually his personality has become more distorted, he has changed greatly from the hard working, conscientious, financially minded, successful and confident business man of pre psychotic days

The further group of cases of chronic mania which have been presented confirm my opinion that such patients should be grouped a shade apart from the more classical manic depressive types with well marked emotional fluctuations Patients exhibiting a psychosis of this type for the first time at the age of 40 years or thereabouts have a consistent, stable pre psychotic history, are of a rigid psycho-biological type and suffer from an illness of prolonged and indefinite duration In many respects they are more akin to the melancholias developing at the involutional period of life than to the manias and melancholias occuring at an earlier age period

The important feature to be noted regarding all the types so far described is that there is little or no deterioration of personality or of the intellectual functions

Depressive States

States of depression are perhaps the most frequent forms of nervous and mental disorders which occur They may be produced by a multiplicity of causes and may assume such a variety of forms that anything like systematic grouping becomes an impossibility It must, therefore, be clearly understood that such attempts at grouping as are made in this article are simply tentative arrangements which have no great validity but are used more for convenience than for any other reason

In general the depressive phase of the manic depressive psychosis consists of three main divisions, (1) simple or mild depression, (2) acute depression (3) depressive stupor

All of the above states exhibit a group of symptoms which can almost be considered specific for the depressive reaction, namely, difficulty in thinking depression and psychomotor retardation It stands to reason that such symp

toms vary in intensity in each individual case so that at one time the difficulty in thinking may be the outstanding feature while at another the morbid mood or the psychomotor retardation may be the more prominent The above symptoms however are very far from telling the whole story as all sorts of other symptoms may be exhibited some of which may temporarily, dominate the clinical picture Every case is different in some respects from the next one depending upon the constitutional predisposition but some of the more common extraneous or anomalous features may be in the nature of anxiety fear feelings of unreality ideas of reference angry impulsive episodes suspicion hallucinations and delusions It is also not uncommon especially in the stupors to experience a clouding of consciousness resulting in a state of mute bewilderment

Before presenting the better known and more usually recognised psychotic reactions of a depressive nature it will be advisable to devote some consideration to those states of general ill health which not infrequently may be psychic in nature and cause but are exhibited as physical symptoms

The point may be illustrated by the case of a young woman 8 years old a nurse, who complained of pain and weakness in her right arm which prevented her from accomplishing her work It was then noticed that she was depressed and worried and talked about the possibility of suicide It was suspected that she might have a cervical rib and she was told so but a later examination ruled out this possibility She was given sick leave and referred for psychiatric examination At the time of examination she explained how the disability affecting her right arm interfered with her future prospects and that it was natural enough that she should be depressed and worried When it was suggested that the cervical rib even although it was present might not have anything to do with her condition but that probably there might be other factors of a complex psychological nature creating a mental conflict she almost immediately launched into an account of her real difficulties and it was surprising and extremely illuminating to see where it all led Some months previously she had been appointed to a responsible post but long before she took it up she had passed through a conflict during which she heard God s voice telling her to take the position offered she felt that it had been ordained that she must serve some special purpose While abroad things did not turn out as she expected she fell hopelessly in love and as a result of her anxiety apparently developed a weakness of the right arm as a conversion symptom During my examination she showed no retardation, but she had a markedly depressed appearance was tense admitted that her mind had been filled with gloomy thoughts and that suicide had been ever present in her mind

Such a case illustrates how the presenting symptom may be physical the ease with which it becomes fixed (operation for the removal of cervical rib had been suggested), and how although neurotic symptoms are in the fore front

yet the real situation is a psychotic one with deep depression and hallucinosis Furthermore, the case shows the extreme difficulty of differentiating what is constitutional from what is environmental, what is a partial as compared with a total reaction It may be that with reconstruction she will never have a further attack, but the probability is that she would not have responded as she had done unless she had had a somewhat gloomy, rigid, pre psychotic personality

There are, however, many cases even simpler than the one given above, and one may instance the transitory primitive reaction states, e g, homesickness, of Kretschmer The difficulty in the above states lies in the fact that the average physician in general practice thinks in terms of the organic, he feels that there must be some actual structural or bodily or metabolic change, which is accounting for the ill health and unconsciously acts as the patient s accomplice in disguising the real explanation Many patients throughly depressed unhappy and ill at ease will complain of headache, or dizziness, or palpitation or dyspepsia, or gastritis, or fatigue, or back ache, or a hundred and one other things rather than admit to themselves that they are leading thoroughly unhappy lives dependent on factors which they have attempted to store in their unhappy souls Think of the cases of hyperthyroidism, peptic ulcer mucous colitis and glycosuria, which have been treated for years along physical lines without any recognition that such conditions are often caused by a disorder in the affective or emotional life or that affective states may form a great part of the symptomatology No one can say when a neurotic passes into a psychotic reaction but that he often does so is clear, and the usual psychotic state is one of depression People are still so afraid to designate such processes as mental , that they shelter under the term nervous more to please the doctor than to afford benefit to the patient That greater recognition shall be given to a better understanding of such disorders is only a matter of time As an index of the progress which is being made Bourne a distinguished gynæcologist, has stated that for back ache dyspareunia and many other gynæcological conditions curettage fixation or even removal were the only methods utilised, but he added ' pelvic symptoms may frequently be an expression of abnormal states of mind Such insight seems to visualise a time when the psychiatrist, the physician and the surgeon will be working on a much closer co operative basis than at present If it were so, many serious tragedies would be averted For instance not long ago I was consulted regarding a young married woman who complained of pain in the left iliac region and stated that she suffered intensely from bladder spasms and incontinence Physicians and surgeons had had an innings vaccines, drugs, bacteriological examinations and surgical operations had all been undergone with remarkable fortitude but with a gradually increasing feeling of hopelessness and consequent depression resulting in two determined attempts at suicide A careful review of the whole life history soon revealed the presence

of psychogenic factors the elucidation and understanding of which effected a satisfactory improvement

In this case just as in the former one we have neurotic symptoms passing into a psychotic state By making these statements I do not intend to throw cold water on the efforts which are being made to effect differentiations and sub-groups but sometimes I earnestly wish that psycho-therapeutists would not talk so dogmatically as they do and that they would recognise that neurotic reactions are part and parcel of broader mental ones It is not of course implied that all such patients are candidates for a mental hospital in fact that is a resort which may never be necessary but I hope and trust sincerely that practicing physicians and psycho-therapeutists will become more open minded and acquire more confidence in the guidance and help of the psychiatrist who has infinitely more experience of such states and their implications than any one else The sort of case I mean is that of a young lady 19 years old who after returning from a finishing school abroad felt dissatisfied at not having accomplished more She found it difficult to adapt to the home routine was inclined to brood thought she should be doing more for others felt her inefficiency in comparison with her friends described herself as a parasite accepting everything from her relatives and friends and contributing nothing herself She became so moody and depressed that she was unable to interest herself in everyday affairs Here there was no retardation no loss of psychomotor activity but merely a mood change with introspection and self pity in the fore front

Another is a young lady 6 years old who blames herself for having treated a young man who was interested in her in an unkind way She had refused to marry him and in consequence blamed herself as she believed that she had killed his love She became depressed tried to compensate in a frenzied way took alcohol felt she would never recover her self respect

Such states are relatively simple episodic affairs which may differ a shade from a cyclothymic state but they are illustrative of certain phases of the depressive reaction and probably are closely related to pre psychotic personality trends The personality is not transformed but is seriously crippled

It would be a splendid thing if we could arrive at the stage where we could say definitely this is constitutional and under certain circumstances a recurrence may be expected and on the other hand this is exogenous or environmental and once the offending cause has been removed no recurrence is likely Unfortunately we have not arrived at that stage Rather we are returning to the view that any such differentiation is both unwise and unprofitable and that it is safer and more satisfactory to think of nature and nurture as mutually interdependent and complementary

Kraepelin found it often difficult to distinguish an attack of manic-depressive insanity from a psychogenic depression The psychogenic depressions to which

he refers, had been reactions to serious delinquencies and threatened legal proceedings apparently corresponding to the primitive, so called panic reactions of Kretschmer He admits, however, that genuine circular states of depression may be caused by emotional excitement, but the criteria, which he advances for differentiation purposes, are far from satisfying Lange, a pupil of Kraepelin s took up the matter in a more determined way but not with any greater success In addition to the constitutional or endogenous types and the psychogenic depressions he produces the ' psychically produced melancholias", which are quite the same as the endogenous varieties, but there is present some external event, which has precipitated the psychosis, and also a fourth group, the reactive depressions, which are simply reactive states in an endogenous determined type of personality He has sought to make a differentiation where none exists and his attempt is most superficial and arbitrary

Wexberg found 601 depressive states among the records of 4,121 admissions He made a division into seven groups, (1) cycloid, (2) schizoid, (3) cycloid schizoid (4) constitutional depressions, (5) climacteric, (6) organic (depression in cerebral disease) (7) reactive Wexberg believed that such groups could be differentiated on the basis of heredity, physique physical symptoms and mental symptoms When one analyses this grouping it seems fairly obvious that the first four states are all essentially constitutional and cannot be split so definitely, the climacteric organic and reactive states can up to a point be more clearly separated

Gillespie s study is based on a series of 25 cases, which he has divided into the two groups of reactive and autonomous he considered the involutional group as a subdivision of the autonomous He takes care to state that he uses the term reactive in a wide sense so as to include both precipitating cause and changes occurring throughout the course of the illness He has in this way widened the conception of reactivity considerably but a careful review of the case material on which his opinions are based and of the differential points raised fails to carry conviction His case material is small to allow for the arguments on which he depends e g the reactive group were commonly worse after a bad night the autonomous patients were apt to be worse after a good one A considerable number of attempted differentiations are made, but for the most part they are subject to many exceptions

Harrowes has made an analysis of 70 cases and arrived at the following groupings (1) reactive depressions (2) autogenous depressions, (3) recurrent depressions (4) psycho neurotic depressions, (5) depressions with aversions (6) involutional types Such a grouping cannot be considered any improvement on those attempted previously Recurrent depressions may be either reactive or autogenous psycho neurotic depression is a redundancy, while depressions with aversion are not by any means a group or a type He calls reactive ones partial and autogenous ones total and so the confusion persists

In many ways Adolf Meyer's formulation is the most satisfying of all and I am indebted to Harrowes' article for it 1 A constitutional depression in individuals of pessimistic temperament These examples often show anxiety and improve with better surroundings 3 A true simple melancholia of unjustified depression The characteristic features are insomnia præcordial pain self-depreciation and guilt ideas inability indecision retardation Later and proportionate with the severity of the condition there is a delusional and hallucinatory state Fear is common suicidal impulses loss of feeling and sometimes stupor are present 3 A prolonged neurasthenic malaise This group approaches the paranoid and schizophrenic types 4 A depressive delirium akin to the *raptus melancholicus* The chief feature is massive fear Nihilistic ideas are expressed 5 A katatonic melancholia The preceding formulation is not nearly so ambitious as the others and really corresponds roughly to states of simple depression acute depressive reaction and depressive stupor The point one is glad to observe is the emphasis placed on the presence of fear

Personally I have no complaint whatsoever with the attempts which have been made to bring greater precision into the differentiation of depressive states but there is little justification for an over-elaboration There are all shades of the depressive reaction in some there is no precipitating cause in others the cause may be important enough to open out the latent disposition but on that account we have no reason to put forward the idea of adequacy etc

The difficulties of determining how much is constitutional and how much is environmental is instanced by the following cases affecting two brothers Their mother died when the patients were in early childhood and they were brought up by their father who following his wife's death became alcoholic and began to lead a vagrant existence Later they were boarded in a working boys' club There has always been a close attachment between the two brothers Another brother has shown instability characterised by lack of discipline and episodes of temper The younger brother when 16 years old was admitted to the Edinburgh City Mental Hospital from the City Fever Hospital where he had been treated for measles complicated by asthma Previous to his admission he had been depressed refused food was unable to conduct a rational conversation His habits were untidy and he required constant nursing and attention The medical superintendent of the Fever Hospital thought the case might be a post measles encephalitis but the patient was so depressed that he attempted suicide At the mental hospital he was in a depressed confused state and took little or no interest in his surroundings At times he was emotional agitated acutely depressed and expressed delusions of unworthiness Physically his general condition was poor and a small amount of sugar was present in his urine

Following admission his condition for three weeks remained unchanged but in the fourth week he showed indications of recovery from his depression and

agitation and began to answer questions in a rational fashion At the end of a further three weeks he had quite recovered from his mental symptoms He had a very hazy idea of events preceding admission

In November 1934 his depression returned, he wept at intervals accused himself of being sinful, said that he wanted to die He had to be safeguarded lest he commit suicide and was admitted to the Jordanburn Nerve Clinic His condition was one of marked depression, but he exhibited an anomalous mood verging on what might be called a ' mixed ' state talking about the possi bility of suicide with a smiling face He had the delusional belief that he was having a bad effect on others and transmitting some disease to them He also expressed ideas of unworthiness These symptoms gradually cleared up and he was discharged

A few weeks later his depressive symptoms returned, he was re admitted to the Edinburgh City Mental Hospital from which he was discharged after a few weeks treatment

His older brother is 21 years old and was admitted to the Jordanburn Nerve Clinic in May 1935, suffering from a state of intense depression This patient had always been deeply concerned regarding the welfare of his younger brother and on occasions had sat beside his bedside talking to him and trying to ease his mind throughout the entire night While worrying in regard to his brother, he had also additional anxiety regarding the uncertainty of his employment The patient was a conscientious hard working young man who had led a very steady life with plenty of healthy interests He had been an efficient workman having served his apprenticeship as a cabinet maker He was considered un usually clever

In January, 1935 following the removal of his upper teeth, due to his interest in boxing he complained of backache and a month or two later had an attack of influenza He returned to work, but did not feel well, he had difficulty in concentrating, his muscular coordination seemed to be impaired For instance in planing a board he felt that his shoulders, arms and back seemed to be moving at different speeds and even in different directions He became self conscious thought that his work was under undue supervision He had attacks of nausea and vomiting which persisted for three days He became sleepless lost fourteen pounds in weight For a month previous to admission he was treated as an out patient and during this time his complaints were essentially of a bodily nature His muscles felt tight he could not relax his shoulders and arms the air which he inhaled did not reach his lungs but stopped somewhere in the region of his neck his stomach felt as if tied in a knot when he reached for his tea-cup, it no longer seemed as if the hand was going to the cup, but rather that, in some vague way, there was another hand, not connected with his body, reaching for the cup, when he walked, he felt as though he were inside out,

he felt as though he were groping in the dark and, when asked to elaborate this statement, he said that objects in the environment had lost their meaning for him and consequently at times he felt lost The preceding description gives a good indication of the bizarre hypochondriacal character of his bodily complaints

In relation to his mood for the past five years each summer he has experienced a transitory depression during which he becomes extremely morbid and on numerous occasions contemplated suicide At present he is in a tense self absorbed state miserably depressed retarded in speech and action and afraid that something more serious is impending He has an excellent appreciation of his disordered state and of his need for help

The above two patients illustrate many important points We have no information regarding their mother but the father's instability is easily recognised and furthermore another brother is temperamentally unstable Under these circumstances we can say that there is an obvious constitutional factor but in addition in the case of both brothers we have exogenous factors which cannot be neglected We may postulate a difficult childhood measles in the case of the younger brother influenza and anxiety for the welfare of his brother in the case of the elder

Symptomatologically the attacks are of great interest In the younger brother we have a quickly recurring depression with suicidal feelings but with the exhibition of an anomalous mood a depressive content but an appearance of happiness In the case of the elder brother the depersonalisation and derealisation features are in the foreground and in addition a tense afraid affective state which after many months' treatment shows no evidence of disappearing

The clinical types of the depressive phase of the manic-depressive psychosis have been divided for grouping purposes into simple or mild depression acute depression and depressive stupor In actual practice the above conditions merge into one another so closely that to prevent unnecessary reduplication a general description will be attempted which in the main will be applicable to all

There are certain *cardinal symptoms* viz (1) sadness (2) difficulty in thinking (3) a slowing down of speech and action which are common to all of the above mentioned phases but these symptoms may vary in prominence and intensity not only in each separate phase but throughout the progress of the illness and it may be from one phase to another The attitude and aspect of sadness is however the feature which is the most outstanding and impressive The posture of the patient is the best indication of his underlying distress He sits with bowed head wrinkled brow drooping mouth and abject mien His whole appearance is one of utter hopelessness and weariness as if he had in every sense come to the end of his tether When questioned sympathetically

he may at once enter into a discussion of his state, and this usually takes the form of self recrimination and abasement, blaming himself often for faults which have never existed or else grossly exaggerating mistakes and misdemeanours which are common to everyone His conversation is coherent and very much to the point On the other hand, the patient may sit without making any spontaneous remark, and when questioned, his replies may be spoken in a low, hardly audible voice and be more or less monosyllabic in type There may be considerable delay (retardation) in answering or in carrying out simple requests, but this feature in the mild depressions, anyway, is not nearly so prominent or marked a feature as has been thought

The possibility of distinguishing between the so called reactive depressions and the endogenous depressions on the basis of the absence or presence of retardation is a fallacy which requires immediate correction Retardation in the one group is just as common or as infrequent in the one as the other In the past it has been the custom to employ the term, simple retardation as synonymous with mild depression, and to that the writer pleads guilty, but greater experience has brought the conviction that retardation is by no means the most prominent feature of the simple depressive reaction On the contrary feelings of sadness of difficulty in thinking are in the mildest cases much more in the foreground, whereas retardation often amounting to total inhibition occurs especially in the severe depressions and stupor states

Mild Depressive State — As an illustration I refer to the case of a young married woman 22 years old whose mother in a period of depression had committed suicide The patient had been a happy, cheerful girl, a tomboy, sociable and efficient She had been clever at school and later an efficient nurse Previous to marriage she had been on night duty for several months had not slept well and at the time of marriage had felt strained and taut While on her honeymoon she began to feel listless, and two days after taking up her new home she was seized with a great feeling of inactivity incapacity and sadness Shortly afterwards she made two attempts to commit suicide once by gassing and once by drowning She was very pleasant and co-operated readily enough but with a certain air of resignation entered into a description of her condition Her replies to questions were prompt coherent relevant She stated that she did not suffer from any confusion of thought, that in relation to the past, she had no difficulty in remembrance but that it was impossible to cast her mind to the future when she does so nothing seems to come It feels as if my mind was paralysed my limbs can be moved, but there does not seem to be anything behind them " She does not think she would have initiative to eat unless food was put in front of her, she would not speak unless spoken to, she would not get up unless she were told to do so it is as if she were not existing Everything was expressed in negative terms she cannot read she cannot

sew, she cannot wash she cannot concentrate Her mind feels an absolute blank 'as if there were no thoughts in it at all' She denied ever having experienced bizarre thoughts hallucinations or delusions Everything outside which she sees seems a long distance away from her there is a worldly strangeness but not enough to create a state of depersonalisation

She feels in agony, terribly sad but while describing her inward thoughts she smiles in a wan manner almost as if it were forced out of her and accompanying it there is astonishment at her own forced gaiety Her husband she seems never to think of it is just as if I had lost all my natural feelings

Her difficulty in thinking was shown by the fact that when she went to do her ordering she did not seem to know what she wanted She could not entertain because she did not seem to know what to say A sample of spontaneous talk is as follows I walk on and on and never speak I am aware of that part of it when I was coming out they told me what to put on when I go to wash I do not seem to know how to go about it I feel more helpless than a child I can t realise what has happened I seem to have a paralysis of the mind I haven t the power to think of illness I can t do it The above remarks followed one another consecutively and without prompting

Such a case gives an excellent picture of the mild depressive state and the points of special interest are the sadness the difficulty in thinking and a certain slowness and feeling of inhibition and incapacity which is somewhat different from retardation During examination her conversation as evidenced by her replies to questions and her activity as evidenced by the promptness with which she did everything required of her failed to bring out the retardation so often thought to be the main feature of such cases There was no pressure of thought but rather a feeling of blankness and emptiness as if my mind were paralysed

The above finding is contrary to the view of Lewis who in a series of 61 cases never found one who complained spontaneously of his thoughts being slower or fewer I can however agree wholeheartedly with Lewis when he says that difficulty in thinking not slowness of thought is the characteristic feature of the mild depressive states but whether such is the case in acute depression and stupors is more problematical

The above case however shows that here in a setting of clear consciousness occurs a mild depression in contrast to the bright happy jolly disposition of pre psychotic days What has determined it constitutional or exogenous? There are no extraneous features nothing to make one think of malignant features It is very difficult to describe adequately far less understand such states Nothing is standardised everything depends on the predilection of the examiner What appears to one examiner as retardation may appear to another

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bition Each complained of great sleeplessness which is so often one of the earliest and most distressing accompanying symptoms of the depressive state

It may have been gleaned from what has been said that in these early mild depressive states there is no clouding of consciousness but rather an excellent realisation of all surrounding circumstances and of their own unhappy condition The memory and intellectual functions are well preserved and the patient has a good realisation of his need for care and treatment often he believes, not so much from man as from God In those cases in which retardation becomes a prominent feature then the patient is merging more towards the acute de pressive and stupor reactions

Acute Depression — In this phase the difficulty of thinking the depression and psychomotor retardation reach a much more advanced stage so that the patient obviously in the depths of misery has the greatest difficulty in expressing a single word There are periods when he will talk but usually only after great urging His story is told in halting phrases and usually he accuses himself of the most heinous crimes calls himself a murderer holds himself responsible for the disease and destruction which may be going on in the world feels that he has caused world catastrophes that he is anti Christ and that he will be con demned to the most dreadful torment and suffering Nothing will be too severe for him He tends to retrace his whole life feels that he has been a scoundrel from youth up that he has been a hypocrite a deceiver a wrong-doer a person for whom everyone must have a profound contempt He sees no hope anywhere he will never be accepted socially he will never be reinstated in his employment He is not really ill at all but a coward a funk a person who has never been able to live up to his responsibilities He is difficult if not impossible to re-assure and if allowed would try to commit suicide so as to relieve the world of a useless burden

Bleuler has expressed the position neatly by saying that the depressive de lusions of such patients concern themselves with conscience as delusions of sin with health as delusions of disease with fortune as delusions of poverty In all of the above spheres the delusions may assume the most diverse and bizarre aspect but usually they are not well sustained Throughout their state of ab-ject misery the memory and intellectual functions are relatively unimpaired and the insight is well preserved During the more acute phases consciousness becomes clouded so that the patient may have only the vaguest idea of time place and surroundings and hallucinations with a fear state accompanying are not by any means infrequent

Sleeplessness and refusal of food are two of the most important practical points in management while the danger of suicide has always to be kept in the fore front

as a difficulty in thinking, a sadness which is real to one may impress another as superficial, an apparent affect loss may impress another as the height of misery It is more advisable to base our descriptions on simple terms rather than on technicalities

At all times the mildness or severity of the case must be taken into account, but in such mild cases as I see in consultation practice I have been more greatly impressed by the sadness and difficulty of thinking and feeling of blankness or emptiness than by the retardation or by the expression that the head is full of *agonising thoughts*

Another case is that of a young married woman, who had always been of a shy brooding, sensitive nature An incidental remark led her to suppose that she suffered from hereditary tainting and that she might be the means of bringing unhealthy progeny into the world When this thought had petered out after the birth of two healthy children, she became worried lest the mental tension and conflict she had gone through would produce an effect on the children She became over anxious and self questioning "Am I a good mother, etc ', and this has gradually lead to depression, inadequacy and loss of interest. Such a case closely approaches a state of obsessive thinking There is an anxiety element in it, but the outstanding feature is the depressive state without retardation

A young man comes with the statement "I have an obsession that my brain won't work" He described himself as "continuously depressed', so that he had lost all hope of betterness of justifying his existence, of being any good to any one He had reached the stage where he felt that no doctor or any one else could do anything for him

Another case is that of a young married woman who for the past 1 years had, year by year had a recurrent depressive state lasting usually for a month to six weeks She becomes depressed, her brain seems to stop working—"I seem to lose my memory, I feel as though I can't manage to carry on" At such times life is a dreadful burden, she would rather be dead—' life seems so difficult she wishes she had never been born There is no retardation to speak of, but rather a sadness and difficulty of thinking which makes life a never ending trial

Another, a young married woman, 31 years old, complains that she cannot look forward to another day she is so sad that she feels as if her emotions had died out she does not seem to be able to think of her baby or of her husband she has not been living up to her ideals it is not an illness, but something which is affecting her soul Her mind dwells on whether she will retain her sanity, on suicide and on death

In the above cases the stories were told quietly and naturally without undue urging They were glad to talk, there was no indication of blocking or inhi

A married man 40 years old in September 1934 was admitted to the Royal Edinburgh Hospital for Mental Disorders in a state of acute depression He looked the picture of misery and had a drawn worn expression He blamed himself for the past said his condition was due to the fact that in his young days he abused himself *He felt that his illness was a just retribution for his misdemeanours* that he was doomed to everlasting suffering that he was the worst man on earth His memory he thought was failing and in a very short time he would lose touch with things completely He identified himself with the devil and twisted and twirled his hair as if he were trying to make little horns on his head He is unique no one such as he ever existed in the world before He feels that he has nothing to look forward to in this life and only hell in the next Throughout his illness he has taken his food well and there has never been any difficulty with bladder and bowels His memory and intellectual faculties are intact He is quite unco-operative He cannot be interested in anything and argument seems only to confirm his judgment that his condition is hopeless He is one of those patients who seem to gain a good deal of satisfaction out of describing themselves as the greatest scoundrels that ever existed

His father had suffered from depression The patient s childhood and early life were uneventful As a young man he was very keen on physical exercise took *pride in his physique and studied Health and Strength no doubt in compensation for his self abuse He became an efficient business man* He was happily married and had two children His illness was precipitated by his wife s illness When he was told that she had tuberculosis his brain seemed to get a thump and almost immediately he became sleepless depressed and self accusatory

This man s condition was so impervious to any therapeutic procedure that it was decided to give him a period of prolonged sleep with somnifaine During two weeks he was given sixteen 2 c c doses of somnifaine in the week o units of insulin daily 960 grams (32 ounces) of glucose during the week and 1950 c c (65 ounces) of fluid daily The patient was asleep for 18 hours out of the 24 Following this treatment he appeared for a day or two more responsive and talkative but in a few days he was expressing his morbid ideas and gloomy views as previously

A depression of this type is extremely difficult to influence The patient has the confirmed belief that all efforts on his part or on the part of others must be unavailing *He has never shown any particular resentment because of his detention* he has never projected his *difficulties on to others* but rather blames himself for his past life and feels that he is now paying the price The sense of guilt probably goes much deeper than the masturbation complex but the mechanism can only be surmised

Acute depression. Rapid onset with feelings of unworthiness followed by sobbing sadness, slowness and resistiveness. History of previous attack with good recovery.

A young, unmarried lady, 27 years old, following a season of social gaiety suddenly becomes depressed, says that she is wicked, that nothing can be done to help her. On admission to a nursing home, she sobbed bitterly, yet she wanted to come and felt that she would rather be with strangers who had had training in dealing with such states. She answered questions regarding her personality and identity in a quiet, low voice, so low that frequently she had to be asked to repeat what she had said. When an attempt was made to ask for details regarding the pitiful condition from which she was suffering, her reaction time was so greatly delayed that either no answer came at all, or if she did answer the reply was monosyllabic. Throughout the interview she sat with head bowed, sobbed quietly but continuously, covered her eyes with her hands and her glance at the physician was one of a startled, frightened child. "Are you very sad?" After a long time — several minutes — "Yes," and this was accompanied by a series of emphatic nods of her head. "Why?" She could not give an answer, but covered her eyes with her hands, shook her head in a mournful way. In response to another question, she replied, "No one can help me." "Why?" "It would not be any good."

Her consciousness was perfectly clear, she was fully cognisant of her surroundings and everything that was taking place. She indicated that everyone had been kind and sympathetic towards her, but when talking about her thoughts she said, "They are not very good thoughts."

There were no extraneous or anomalous features, no ideas of reference, hallucinations or delusions, but just a sadness, slowness and resistiveness characteristic of such states. Everything has to be done for her. She is dressed and undressed, is helped with her meals, has to be taken to and from the lavatory, has to be assisted when out walking and has to be under constant observation night and day. She often remarks that she wants to die. Despite the above picture she has excellent insight into her condition and realises the necessity of care and treatment under nursing home conditions. Physically she is in good health.

Her history shows a family predisposition, but the patient herself was a bright, happy girl, a little rigid, a little over-conscientious, over-scrupulous, but yet a great favourite and very capable. Five years previously, she had had a similar attack which persisted for three or four months, but which ended in a good recovery.

Acute depression. Rapid onset with great misery, apprehension and self-reproach due to masturbation. An ambivalent mood. No improvement after one year's treatment.

A married man 40 years old in September 1934 was admitted to the Royal Edinburgh Hospital for Mental Disorders in a state of acute depression He looked the picture of misery and had a drawn worn expression He blamed himself for the past said his condition was due to the fact that in his young days he abused himself He felt that his illness was a just retribution for his misdemeanours that he was doomed to everlasting suffering that he was the worst man on earth His memory he thought was failing and in a very short time he would lose touch with things completely He identified himself with the devil and twisted and twirled his hair as if he were trying to make little horns on his head He is unique no one such as he ever existed in the world before He feels that he has nothing to look forward to in this life and only hell in the next Throughout his illness he has taken his food well and there has never been any difficulty with bladder and bowels His memory and intellectual faculties are intact He is quite unco-operative He cannot be interested in anything and argument seems only to confirm his judgment that his condition is hopeless He is one of those patients who seem to gain a good deal of satisfaction out of describing themselves as the greatest scoundrels that ever existed

His father had suffered from depression The patient s childhood and early life were uneventful As a young man he was very keen on physical exercise took pride in his physique and studied Health and Strength no doubt in compensation for his self abuse He became an efficient business man He was happily married and had two children His illness was precipitated by his wife s illness When he was told that she had tuberculosis his brain seemed to get a thump and almost immediately he became sleepless depressed and self accusatory

This man s condition was so impervious to any therapeutic procedure that it was decided to give him a period of prolonged sleep with somnifaine During two weeks he was given sixteen 2 c c doses of somnifaine in the week 20 units of insulin daily 960 grams (32 ounces) of glucose during the week and 1950 c c (65 ounces) of fluid daily The patient was asleep for 18 hours out of the 24 Following this treatment he appeared for a day or two more responsive and talkative but in a few days he was expressing his morbid ideas and gloomy views as previously

A depression of this type is extremely difficult to influence The patient has the confirmed belief that all efforts on his part or on the part of others must be unavailing He has never shown any particular resentment because of his detention he has never projected his difficulties on to others but rather blames himself for his past life and feels that he is now paying the price The sense of guilt probably goes much deeper than the masturbation complex but the mechanism can only be surmised

Acute depression Acute onset Great depression and agitation with delusions of wickedness and unworthiness Attempts at suicide Previous attack 16 years ago Paranoid personality, dominating, punctilious, suspicious Complex determined trends

A single woman, 42 years old, in December, 193? was admitted to the Royal Edinburgh Hospital for Mental Disorders Her psychosis was one of acute onset For ten days previous she had seemed strange and worried, complained of inability to concentrate and was greatly concerned regarding the safety of her mother and brother She accused herself of great wickedness and sin, said she was the worst criminal in the world She developed ideas of reference, lights and sounds all seemed to have some special significance, strangers and friends were described as being connected with the C I D (Criminal Investigation Department) She accused her brother of having murdered a man in Australia She accused herself of having cheated the Government She attempted to commit suicide by cutting her throat and by stabbing herself

On admission she was in a restless, agitated state, was constantly wringing her fingers, or fingering the dressing on her neck She was miserably depressed, tearful and apprehensive She was sure that she would be handed over to the police She accused herself of having cheated the income tax investigators and for such a crime there would be great publicity and the news would be in all the papers Everyone, she felt sure knew about her and what a terrible criminal she was The nurses and patients view her with grave suspicion and write notes regarding her She felt that she had disgraced her family by her suicidal attempt her brother s fiancee would give him up The shock will be more than her mother can bear At her trial the Church and the Masons will appear against her She explained her suicidal attempt by saying that she felt the net tightening, she was guilty, and it was the quickest way out

Following her admission and at the time of her first menstrual period she became very excited and said that the other patients had been accusing her of having had immoral relations with her brother Later she said she was being accused of having a baby that she was losing her Christian faith that she had a premonition of doom The other patients call her a murderess, but do not mention any specific murder She fears she may be given venereal disease She hears her mother being maligned and slandered Apart from the above state, she has a thoroughly good appreciation of her position and surroundings Her intellectual faculties are quite unimpaired

The patient's mother had suffered from a depression necessitating mental hospital treatment she made a good recovery and there has been no return for 25 years Since then the patient has always resented having to give way to her mother

The patient's birth and infancy were normal She attended school from 5

to 15 years of age had a perfect attendance record and was usually first in her class After leaving school she became an efficient clerkess and attained a position of considerable responsibility She was competent efficient and punctilious She was inquisitive rather suspicious and dominating She was sensitive and when she had been offended or hurt she would respond by refraining from conversation or actually avoiding whoever she thought was at fault

In 1917 when 26 years old following a disappointment in love with a man whom she had identified with her brother she became depressed and suicidal and was admitted to a mental hospital In five months she had made a good recovery and was discharged In addition to her work she was treasurer of a benevolent society for which she did a great deal of work When her brother became engaged to be married she displayed jealousy towards his fiancee

At present the patient is making satisfactory progress towards recovery She has regained confidence and is looking forward to resuming work

The above case is of extreme interest in that it is a manic depressive state complicated with paranoid features and occuring in a paranoid personality It justifies Freudian interpretation The points of interest from the psychopathological point of view are the resentment of the domination of the mother the misidentification of her lover with her brother just prior to her first illness the onset of the present illness when her brother is contemplating marriage and the appearance in her delusions of incestuous wishes towards her brother The suicidal attempts can be thought of in terms of an inverted sadism because of her incestuous wishes

Acute depressive reaction of acute onset Insomnia lack of energy fear and attempts at suicide have been the prominent features Inaccessible and resistive to subjective analysis Recurrence of depressive attacks since menarche

An unmarried woman 34 years old in 1935 was re admitted to the Royal Edinburgh Hospital for Mental Disorders The onset was acute and was characterised by insomnia lack of energy and the conviction that she was unable to do her work She was haunted with the fear that there would be a recurrence of mental illness leading to total incapacity She became intensely depressed wept bitterly had a strained tense anxious expression and great difficulty in expressing her thoughts When she did speak it was only to express fear lest she should become hopelessly insane On one occasion she slipped from the observation ward while the nurse was attending to another patient and made a determined attempt to hang herself On many occasions attempts have been made to enter more closely into her thoughts but she merely describes her state as a meaningless depression Her chief anxiety is to return home and to resume work She states that she knows of no reason for self reproach but feels that there is something she cannot understand and repeatedly asks for an ex

planation of her illness She is perplexed regarding her attempts at suicide, but feels it is the obvious course to take There are no extraneous symptoms Her intellectual faculties are unimpaired She has good insight into her condition

Her family history indicates that her paternal grandfather and her father both suffered from depressive attacks The patient had been a reserved, quiet shy child She did well at school and later became an efficient dressmaker

At the menarche she showed disinclination for activity and was in bed for three or four weeks with what was described as debility When 25 years old she had a further breakdown during which she complained of lack of interest in her work was sleepless and lacking in energy Her thoughts were described as evil, unpleasant and foreign to her usual state, but questioning failed to elicit anything more than general statements She made a good recovery in a few months time Three years later she had a recurrence, became haunted with the fear of insanity, was acutely distressed, and on two occasions attempted suicide

Recovery however, occurred and for three years she remained well and efficient up until the onset of her present illness

Recurrent acute depression The psychosis rich in symbolism and rationalisation an over compensation for sexual irregularities

A married woman 35 years old, was admitted in November, 1923 to the Royal Edinburgh Hospital for Mental Disorders in a state of great mental distress She spoke as follows 'I am a blackguard, the biggest in the whole world, and everyone knows it There is something I feel I cannot tell anyone I went with a dog when I was 12, it was a sin and wicked because the body is for Christ I think I am the one lost sheep spoken of in the Bible and the Saviour is searching for me I want to get home to the Saviour and my babies God is the father The Jewish lady (another patient) is the mother of the Saviour A great price has been paid for me Christ redeemed us with his own blood I know my brother must have laid down his life for me I was the cause of his death I want to be at home for the New Jerusalem The King s son (Prince of Wales) would take me there, the Prince of Wales was in Orkney sure enough he had a coat and a pair of gloves in his hand it was in the house and the Jew I bought from was there too and he was the Master himself I think they must all be dead surely (weeps), but I ll go there on the hand of the Prince of Wales While she was talking about death and self injury, she was asked regarding thoughts of suicide and replied 'I think I did my Saviour died for me and my brother in the second place, I thought of a great pool of water and I went there I thought I'd go in there I saw the rainbow there I knew that 'neath the emerald glow was Jesus himself

The above condition had been of acute onset Quite suddenly 10 days pre

vious to admission she refused to eat or speak lost interest in her children the youngest of whom was 6 months old There was no apparent reason for the sudden change in her behaviour Two days later she was found at 7 A.M. standing in a graveyard clothed only in her night attire and with her her six months old baby with bare arms legs and head She seemed in a state of deep distress

The patient had been a healthy child who had developed in a normal way Previous to marriage she had worked as a domestic servant When 24 years old she had had a previous depression during which she had threatened to commit suicide After eight months treatment in a mental hospital she made a good recovery Her rationalisations are of more than ordinary interest When her psychosis was reviewed she stated that at the time of her first breakdown she had become pregnant before being married Following this she suffered from remorse and her mind was filled with suicidal thoughts Then it was revealed to her that she would give birth to the King of Heaven who is also the Lion of Judah She believed the child had been stolen from her and sold or taken to a strange place she does not know by whom or for what reason At that time and previous to her first admission she refused to eat because she thought her step-mother was giving her blood to drink

In her present illness she has come to the understanding that she has a special mission to fulfil She calls herself the Queen of Heaven the Mother of the Lamb and through her heaven and earth will become reunited She does not know why she should have been chosen for such a special purpose but she has wondered whether her mother was not descended from a mermaid A man married a mermaid and stole her skin so that she could not return to the sea He hid the skin Years after she asked her son where her skin was hidden, and he told her and she took it and returned to the sea Maybe my mother was one of her descendants

Throughout her narrative she was very emotional showed great pressure and wept frequently and bitterly She appeared to blame herself for her delay in not completing her mission and admitted to dread and awe at the responsibility before her

An acute depressive state which has persisted with mild fluctuations for 3½ years Self reproachful delusions have led to repeated suicidal attempts Well marked evidence of regression to a primitive level but little or no deterioration of personality Good insight

A professional man 52 years old in 1920 was admitted to the Royal Edinburgh Hospital for Mental Disorders

His family history showed that on the paternal side there was a history of tuberculosis A maternal uncle was inclined to melancholy and was depressed

planation of her illness She is perplexed regarding her attempts at suicide, but feels it is the obvious course to take There are no extraneous symptoms Her intellectual faculties are unimpaired She has good insight into her condition

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sample of his spontaneou talk is as follows *Are they going to take me to the slaughterhouse now? — I can t sleep at night — I have no right to exist they must get me shot at once — I could walk to the scaffold all right although my chest is bad'* His memory and intellectual functions were found to be relatively intact He had a good appreciation of his depressed state

Occasionally for short intervals the patient comes up to a much better level when he is able to interest himself in the activities and amusements of the hospital but he never swings into a well sustained manic phase Physically he now has a well marked arteriosclerosis with high blood pressure 206/112

While expressing the most dreadful delusions as to his state and as to what should be done to him the patient always has a certain air of self satisfaction in considering himself as one of the most dreadful criminals who have ever existed His wish to be put in a cave where no one could see him that he should have his tongue cut out are indications of a reversal to an early developmental stage

Depressive Stupor — The study of the stupor reaction has been a strangely neglected field and our thanks are due to August Hoch who in 1921 gave an excellent review of the whole topic Previous to Hoch significant contributors are few and far between In 1835 Etoc Demazy wrote a thesis on stupor in which he declared that stupor was not a separate form of insanity but a complication of monomania or mania Baillarger in 1843 in an attempt to simplify psychiatric groupings stated that the acute dementia of Esquirol and stupidite were in the majority of cases only the highest degree of melancholia cum tupore Dagonet (quoted by Hoch) in 1872 gave a comprehensive summary of the views previously held and defined stupidite as a form of insanity in which delirious ideas may be present but that stupor and an inability to co-ordinate ideas were the main features Dagonet went very fully into the whole question pointed out the varying ætiology of the different forms which might occur and reported and discussed numerous cases He noted particularly that stupor might precede alternate with or succeed attacks of mania and that the prognosis was good He further noted that stupor was an abnormal mental reaction usually psychogenic but often the result of exhaustion that it consists of a paralysis of emotion will and intelligence and that mental stimulation often will produce recovery

In 1874 Hayes Newington published an important and interesting paper in which he attempted to distinguish two varieties which he termed anergic and delusional stupor respectively Anergic stupors were of rapid onset intellect impaired memory gone no sign of emotion, features relaxed eye vacant and not constantly fixed volition absent motor system weak catalepsy sensory system and reflexes dull, pupils dilated, extreme emaciation vascular system

for many years before his death, a maternal uncle and aunt were both alcoholic. One brother was nervous and particular

The patient was a delicate child, who later developed a fear of tuberculosis as so many of his father's family had died from that disease He was nervous and easily frightened, especially at night time, when he used to shriek out He did quite well at school, was sociable, had plenty of friends, but when 19 or 20 years old he began to be subject to bouts of melancholy

When 25 years old his depressive symptoms became more marked he complained of tiredness and sleeplessness and worried greatly because he seemed to lose faith in religion In his work, which he carried on by fits and starts, he shrank from responsibility, worried greatly about erroneous diagnoses and reproached himself He also blamed himself on account of masturbation and nocturnal emissions When 29 years old, in a still more depressive phase he attempted suicide

When 33 years old while under nursing home care he again made a desperate suicidal attempt His condition was one of remorse for the past and fear for the future, he said that he would be transported for life Since that time he has been more or less under constant mental hospital care and supervision In addition to his depressed retarded state, during which he complains of difficulty in thinking, he expresses many delusional ideas of a blameworthy nature He describes himself as a madman, says that he ought to be hanged for high treason, that he should be drawn and quartered, that he has killed his brother and sister and should be in Pentonville instead of in a mental hospital

On another occasion he put his hand through the window of his room wishing to sever the arteries in his wrist There were periods in his depression when he seemed to become confused e g, one morning he said "I have to go somewhere '— when asked where to, he said "I have to go to Milan to be kept there till the end of the war as a spy ' When he became obsessed with the idea of the crimes which he had committed he said on one occasion "The only place I am fit to be in is a cave where it is dark and no one can see me " He constantly expressed the wish to be put to death always with the most exquisite torture, and on other occasions he attempted suicide and also to injure himself by violently hammering his chest with his fists by slapping himself on the face He blamed himself for having started the War, for ruining his relatives, for bringing all the other patients to their present lamentable state he ought to be executed as an outlaw, be burned alive and crucified, have his tongue cut out He believed that he was the means of emitting evil influences on all around him by wireless waves

A recent examination (September 1935) demonstrated a marked depressive state with difficulty in thinking and some retardation During the examination he occasionally rose from his seat and asked to go away to be killed A short

sample of his spontaneous talk is as follows Are they going to take me to the slaughterhouse now ? — I can t sleep at night — I have no right to exist they must get me shot at once — I could walk to the scaffold all right although my chest is bad His memory and intellectual functions were found to be relatively intact He had a good appreciation of his depressed state

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profoundly affected as shown by slow pulse and cyanosis tongue clean or, if not, it is moist, habits dirty Delusional stupors were of slow onset, intellect not impaired memory preserved, features contracted, eyes fixed on one point, usually upwards or downwards or obstinately closed, presence of volition shown by great stubbornness, motor system little interfered with, patient standing or kneeling from time to time, more ability to bear pain, pupils contracted, nutrition affected pari passu with mental state, the disturbance of vascular system is less marked and comes on later, tongue very dry, furred, refusal of food, constipation, habits rarely dirty

Hoch claims that the distinctions drawn between the above types correspond closely to his own attempt to differentiate between benign and malignant stupors, even although Hayes Newington did not touch on prognosis at all Hayes Newington noted the frequency of anergic stupor, especially after acute mania, in women Wernicke s method of classifying all stupors as akinetic psychoses is an easy way out of the difficulty but perhaps is too sweeping and paralysing for clinical differentiation Kahlbaum had, by this time introduced the term catatonia' to denote a group of stupor cases which showed alternations, but many of whom recovered Kraepelin enlarged the meaning of the term and used it to designate a sub group of dementia præcox Kraepelin clearly recognised that catatonic states occurred in epilepsy, toxic-exhaustive states, brain tumor general paralysis states of mental defect and so on but under such conditions the stupor state was transitory, whereas in those conditions, not organically determined catatonic stupor was indicative of a deteriorating process Later Kraepelin admitted that approximately 13 per cent of stupor reactions recovered, but he was inclined to consider them as remissions rather than as absolute recoveries Wilmans in 1907 reviewed Kraepelin s cases and came to the conclusion that catatonic symptoms as indicative of a deteriorating process had been greatly overrated Kirby, Devine and Henderson have all described cases which have exhibited stupor symptoms but accompanied or alternated with manic depressive syndromes It may be that stupor is not quite identical with an extremely depressed, inhibited state, but to describe it as Hoch does as ' a new manic depressive reaction type is stretching things too far in another direction But before discussing the position which Hoch takes it would clarify matters to state and describe what the stupor reaction consists of

Stupor may be defined as a state of intense psychic inhibition during which the patients regress to an infantile, if not more primitive, level The patients become so oblivious of their state and surroundings that they not only seem to lose all interest in themselves but also in what goes on around them It has been usual to describe the condition as one of apathy and affectlessness, but I doubt whether either of these words accurately describes the condition or state of mind of the patients It seems, indeed that a large number of the patients have

passed through all the anxious fears and forebodings of the earlier stage of a depressive illness and have reached a state of resignation to whatever may be in store though it be pain or torture or even death itself but there are others more perhaps than is usually thought who do not lose their affect who are strained puzzled perplexed ill at ease and who later will state that they have suffered tortures The opinion expressed above which is contrary to what is usually believed receives support from a sentence of Hack Tuke s which I may be allowed to quote He says There are cases in which the ablest alienist is unable to decide whether the mind is what the outward expression would lead us to infer — a complete blank — or the seat of such intense depression and painful delusions as only to simulate dementia Mental stupor may be employed to cover both conditions until it is ascertained which of the two is present' The facial expression then may be dull and vacant but I always think of it as troubled and sometimes it is obviously perplexed and anxious Hoch was inclined to believe that so-called perplexity states were to be differentiated from stupors The mind he says is not a blank as in the stupor or concerned only with delusions of death I doubt whether differentiation can be pushed to this pitch In my opinion the perplexed cases are those bordering on stupor and are only a stage in the development of stupor In any case the examination of cases of stupor is far from easy a smooth exterior cannot be looked upon as evidence of blankness or vacancy but may serve as a defence to many absorbing thoughts and feelings of high affect value

When the stupor becomes profound the patient usually is confined to bed is mute inactive inaccessible and so greatly inhibited that no effort of any sort is made in any way to help himself He requires to be attended to in every way he has to be fed often by means of spoon or tube he has to be washed and bathed his bladder and bowels require to be attended to he allows saliva to accumulate in his mouth makes no effort to brush any flies which may be crawling over his face does not respond to painful stimuli (pin pricks) Sometimes they maintain fixed positions for long periods (catalepsy) and often they are so negativistic that attempts to move them are resisted with all their strength and often with an aspect of terror If they are able to be up they sit in awkward strained positions and if moved have to be more or less pushed or dragged around On occasions odd detached remarks usually of a mystical nature may be uttered Kraepelin instances such remarks as that they are quite away from the world have a crack through the brain are being sold When complete consciousness returns the patient usually has little or no memory of the condition through which he has passed but on the other hand there are cases who can recount everything which has occurred and even chance remarks passed at the bedside Great care should be taken in all stupor cases not to say anything in their hearing which may be apt to cause them injury or pain

Hoch's investigation of a large group of cases was undertaken to find whether *stupor symptoms could be brought into relation with other symptoms* and to the personality of the individual as a whole He characterised the stupor reaction as consisting of (1) more or less marked interference with activity, (2) interference with intellectual processes, (3) affectlessness, (4) negativism He further stated that the idea of death is almost universal in stupor, and in this connection it may be remarked that suicidal attempts are common, the attempt at suicide being a sort of dramatisation of the death state In 36 consecutive cases death ideas were found in all but one He believed that such ideas occurred while the stupor was incubating, and that "probably death ideas and stupor are consecutive phenomena in the same fundamental process" Death expresses a shrinking from adaptation and reality and may symbolise one of the most deep seated yearnings of the human soul, and often associated therewith is *a desire for re birth Hoch, however, goes so far as to state* that apathy is the sine qua non of the stupor reaction and that it is as distinct a mood change as elation, sorrow or anxiety Physically Hoch found that the majority of his cases showed a febrile reaction, and that the temperature might vary between 99° and 101° F He suggested that the temperature disturbance might be the result of failure of the heat loss function caused by an imbalance of the involuntary nervous system, caused by insufficient circulating adrenalin due to the apathy which is so fundamental a feature Other features which he mentions are suppression of menstruation, epileptoid attacks, emaciation, cyanosis and the falling out of hair

The above observations may be considered a little more *critically* in the light of the following cases

(1) An unmarried woman 30 years old, was admitted in July, 1935 to the Royal Edinburgh Hospital for Mental Disorders in a state of stupor She looked extremely ill, her pulse was bounding in character and recorded 140 per minute, her respiration rate was between 40 and 50 per minute, and her temperature was 101° F Her bowels had been costive for approximately five days previous to admission She was extremely resistive to all care and attention so much so that her mouth had to be forcibly opened She was incontinent of urine but a catheter specimen showed a small amount of albumen sugar and acetone, but no blood or casts were found A blood count revealed a white cell count of 13,200 with an excess of polymorphs A thorough physical examination failed to reveal any source of infection other than a loaded colon Her bowel was cleared by means of enemas, and in six days her temperature had settled

Mentally she was mute, refused food and had to be tube fed, she was incontinent of urine saliva drooled from her mouth she was insensitive to pin pricks, and she was so negativistic that when attempts were made to move her limbs she resisted with every ounce of her strength

Her facies was difficult to describe There was a blankness and immobility about it which perhaps was predominant but in addition there was often a look of anguish as if she were feeling her position acutely This was followed by a trance like state in which she appeared quite oblivious to her surroundings The patient had come from a healthy stock and had developed in a healthy way She was a rather timid serious minded girl who took her school work rather much to heart After leaving school she interested herself in house work and led a secluded sheltered existence She however managed the household in a thoroughly capable manner was even tempered cheerful extremely sympathetic and interested in others

The onset of her illness is difficult to describe Early in the year she woke in the middle of the night with a start trembled but did not appear to be afraid On the following two nights there were similar episodes for which no explanations were forthcoming She seemed apprehensive slept poorly talked about a recent accident and about the death of her mother s friend She became more seclusive at times was agitated began to express depressive ideas wondering whether she would ever get better She seemed unable to concentrate was preoccupied with the idea of death and once asked her sister to take her life At other times she said it would be wrong to do herself harm She spoke as if she was prepared to remain an invalid for the rest of her life and having made up her mind on this point she seemed more happy Again however when she thought of the possibility of the death of her mother she would become more agitated and would cry out Oh! dear Oh! dear Following admission there has been some improvement

Depressive Stupor Acute onset following pregnancy and death of child Patient s mother had involutional melancholia Resistive inaccessible tube fed incontinent of bladder and bowels Preoccupation with ideas of death No loss of affect Illness punctuated with impulsive episodes

A married woman 37 years old in April 1935 was admitted to the Royal Edinburgh Hospital for Mental Disorders in a state of deep depression and agitation which rapidly passed into stupor She was so inhibited that she had the greatest difficulty in expressing her thoughts Her remarks were spasmodic and seemed almost forced out of her The gist was to the effect that she held herself responsible for the death of her child that she was to be punished and that everyone would suffer on her account She was terribly unhappy said that she could not eat moaned when she heard a train passing and asked that it should be stopped wondered whether she had been chloroformed She was hazy as to place and had no idea what day it was or how long she had been in hospital she recognised the doctors and nurses as such An accurate estimation of her intellectual functions insight etc was impossible owing to her inability to co-operate

Her tongue was furred, her pulse bounding in character, her general physical health extremely debilitated, but there was no temperature disturbance and no organic disease of her organs

Following her admission she continued to be extremely tense and emotional, was impulsive and attempted to escape Then the stupor symptoms became more intense, she refused to eat and had to be tube fed She was incontinent of bladder and bowels She was resistive to all attention showed a mild cataleptic state and no response to painful stimuli On one occasion she sat up in bed said that a coffin had been put on one of the adjacent beds and that the doctor had placed it there While in this talkative stage, she babbled about her children, the coffin, she said her food was poisoned and strangely enough seemed amused by some of her ideas This period was, however, quickly followed by a return to the stupor state She waved her arms in a stereotyped manner, her lips moved soundlessly, she appeared as if hallucinated

Her family history showed that her mother had died in a mental hospital following an attack of involutional melancholia The patient had been a healthy child, who had developed normally She was of a particularly bright, happy cheerful disposition thoroughly devoted to her husband and children

Two months previous to her admission to hospital she gave birth to a child which died a few days later It was following the death of this child that she became depressed sleepless and preoccupied with the idea of death She said that the other members of the family would be better dead, and that the death of the baby was a punishment for her sins

At present she is still quite inaccessible Her attitude and appearance indicate great tension and unhappiness She requires to be tube fed and is quite incontinent of bladder and bowels

This case can be related quite definitely to her pregnancy and the death of her child Qualitatively her response was adequate and natural but quantitatively it has been unduly protracted The condition itself and the preoccupation with death ideas reminds one of a state of penance in response to feelings of guilt How or why they have been determined, if that is the true explanation, has not been elucidated An interesting point is the relation of the patient's illness to her mother who died in a state of involutional melancholia at the age of 60 years If it is true that involutional states in the forebears are almost invariably followed by schizophrenic or mental defect states in the descendants as Myerson has suggested then we might in a case such as this be inclined to view the stupor symptoms with resistiveness, refusal of food incontinence hallucinations as pointing to a schizophrenic rather than to a manic-depressive component At the moment, however, I would be more influenced by the history of a bright, happy, open personality and by the acute onset following an exogenous precipitating factor than by stressing the re

gression to a primitive level The fact too in contradistinction to Hoch s cases is that in this case there appears to be no loss of affect but rather its retention at a high level

Depressive Stupor Acute onset in a young woman who had shown emotional fluctuations suicidal feelings and the expression of ideas of death Refusal of food incontinence affect one of great anguish probably dependent on conflict over overt homosexuality

A single woman 28 years old a teacher in 1935 was admitted to the Jordan burn Nerve Hospital in a state of stupor She lay in bed perfectly still often wearing a puzzled frown paying little attention to her surroundings and apparently entirely intent on her own thoughts She had to be fed with her meals and was resistive and negativistic to all attention She was depressed and suicidal on one occasion being seen attempting to tie her pyjama cord round her neck She was incontinent of bladder and bowels She was inaccessible to any detailed examination but occasionally she made scattered remarks e g Oh ! I will be killed when I go in I told the doctor two minutes but I was just guessing On another occasion she referred to eating and said Nobody eats but me At other times she asked for a knife or anything sharp with which she might kill herself She felt certain that she had missed her last chance and that she would never get better Her expression was often one of great mental anguish her face became screwed up she pulled violently at her hair and looked as if she were experiencing severe pain During one interview she proceeded to remove her night-clothes but did so as though she were being forced to remove them Must I undress? she repeated frequently

Since her admission now extending over a period of six months there has been no real change in her condition She is still tense puzzled anguished and inaccessible to any detailed examination On occasions she has conversed a little on impersonal topics and has shown that her memory and intellectual faculties are well retained and that she has considerable insight into her condition She is preoccupied with the idea of death is self reproachful and blames herself for her attitude and conduct to the other patients

Physically she is a distinctly lean type with rather long extremities and a narrow pelvis Her breasts are poorly formed there is a growth of hair on the upper lip but otherwise hair distribution is normal

Both her parents are dead her mother died of consumption and her father is thought to have died from the same condition He drank too much Patient s sister is over active has a pressure of talk is highly nervous and moody

The patient was described as an active interested person who was never still for a minute She tended to be elated and had a new enthusiasm every week Occasionally she was depressed for a day or two Her home life was

unhappy, the family were poor, the patient was not always adequately fed and was badly dressed She was a clever girl who gained bursaries at school, but she felt the humiliation of not being so well dressed as other girls, and she had no pocket money In addition to taking a degree at the University she had the strain of looking after an invalid mother and of attending to all domestic duties She worked very hard but was full of activity and interest

When 17 or 18 years old, she developed overt homosexual habits which persisted until the development of her present illness About six months before her illness started, she deserted temporarily her Lesbian partner for a married woman who is supposed to have seduced her Three weeks previous to admission she complained of gastritis with sickness and abdominal pain She was very emotional She went for a holiday, but almost at once her conduct was noticed to be disordered She made a ritual of dressing everything had to be done in a certain order and if she made a mistake, she went back to bed then got up and started dressing all over again She was haughty and ordered her friend about "Go away, I want to be alone Hold my hand, don t speak to me"

One night, her friend, who was not sleeping with her heard her fumbling at the door and found her standing outside, naked, with an orange in her hand She was perfectly calm and allowed her friend to lead her back to bed without demur She explained to her friend that she was going back to Nature She expected to have meals served every two hours and expected that her friend should get up during the night to continue this routine The whole of one morning she spent burning papers, photographs and letters, almost as though she thought she was doing to die or as though she wanted to destroy the past She was at this time terribly talkative said bitter things about her friends and relatives, accused people of all sorts of immorality, said that her Lesbian partner had had numerous mistresses Her own attitude was one of grandiosity and moral uprightness This phase was soon followed by one of great depression passing on to stupor

The above history is of very great significance There is little or no doubt that the patient s pre psychotic disposition was of the manic depressive type Her difficult life and up bringing *may have heightened* her hypomanic mood but her instinctive conduct became fixed at a homosexual level The stupor from which she is suffering at present is her inadequate attempt to solve her conflict by a blotting out of reality Her refusal of food, her incontinence and her feeling that she must get back to nature, appearing naked with an orange in her hand are indications pointing to pregenital libido fixations

Another interesting point is her attempt to break from her depression by adopting a grandiose phase and by projecting her ideas of guilt on to her environment

Depressive stupor Slow onset with fluctuation of mood Perplexed state passing into deep stupor with negativistic symptoms A mystical hallucinosis has been a feature Clear evidence of mother fixation

A married woman 35 years old was admitted September, 1935 to the Royal Edinburgh Hospital for Mental Disorders with a history of transitory periods of depression which had come and gone for about one year These periods would last for a day or two she became quiet and depressed would not respond to questions but her lips would move as if she were whispering to herself She would then return to her usual bright and cheerful self She slept badly was continuously restless would get up and move things about She took a long time over her meals seemed abstracted and dreamy and had prolonged bouts of weeping which she could not explain Gradually her depression became more marked she could not seem to interest herself was more restless sleepless and inaccessible A week previous to admission she refused to eat at all and lapsed into a state of mutism

On admission she seemed bewildered and was strange in her manner She submitted to a physical examination in a wondering manner glancing from the nurse to the doctor in a confused almost automatic way She swallowed an egg flip and copious fluids when told to do so Later she spoke in a detached impersonal way as if to someone across the room He will prepare her to be killed — to be burned — and to have her body destroyed Her utterances were fragmentary and not in reply to questions By the following day a further change had taken place in her condition Her attention could be obtained and she responded to some questions but there was marked retardation and a lack of consecutiveness due to her trying to collect the threads of her life She had an air of great sadness not of affectlessness She said that she was subject to voices they seemed to come from the ceiling sometimes one steady voice and sometimes two men s voices mostly They talked in a kind of mystical way What do you see on the wall or mantelpiece? What do you see here? What do you see there? A steady rhythmic voice used to draw her mind to the different things indicated and they were very nice and pleasant It may have been God s voice directing her She described things she seemed to see A lovely white cloak seemed to be the centre of it all There was an angel and two little children The Virgin Mary came down and spoke several words At this point the patient stopped talking and her lips moved soundlessly

At present the patient has lapsed into a state of profound stupor with refusal of food mutism resistiveness and incontinence She does not impress one as apathetic and resigned but rather as troubled anxious and intensely depressed

The patient had an excellent family history and had been a healthy bright clever child Music was her chief interest and before marriage she had earned

her own living as a member of an orchestra She had a bright, active personality Her married life was said to be happy and congenial, but there were no children Marital intercourse had never been satisfactory, she was described as frigid and as frightened and distressed by it She was terribly devoted to her mother, and even after marriage a very intimate association was maintained with her mother

The case illustrates, in contrast to the majority of the other cases, the slow onset, in a woman of artistic temperament, of a distressed, perplexed, depressed state which has merged into a profound stupor We have no real knowledge or understanding of how it has come about, but the devotion to her mother, her frigidity, the absence of children the mystical nature of her thoughts accompanied by refusal of food mutism, etc, all point to the condition being determined at a primitive level

A cyclothymic personality developing an obsessive compulsive state with fear of injuring others Twelve years previously a stupor reaction with recovery

A married man 51 years old, was admitted in August, 1935 to the Royal Edinburgh Hospital for Mental Disorders in a state of great depression and "overwhelmed by a great fear of kicking people' His fear was principally referred to his left leg Following a period of very hard work, while returning on the top of a tram-car, he was seized by the sudden thought that he might kick some one For the two months previous to admission the above thought never seemed to leave him and so affected his left foot that he began to turn it inwards On account of this fear he became greatly depressed had to goad himself on to accomplish his work, but finally had to give it up altogether When out walking, he always looked round to convince himself that he had not kicked any one, his fear was particularly great, if he happened to pass children Latterly, he became afraid lest he should injure his wife and child He told his wife to lock her door in order to make certain that he would not do her any harm

When admitted to hospital he was in a state of great mental distress and demanded to be safe-guarded lest he should attack the nurses or other patients When describing his symptoms and fears he had an air of self satisfaction and complacency, which is difficult to describe He seemed almost to glory in the possibility of what he might accomplish should he become aggressive He showed a great lack of initiative but once he began to talk he described his fears at great length and dwelt particularly on how concerned he was for the safety of the women (his wife and child) in the house Fear was the fundamental emotion which seemed to produce depression He said "It seems to grip me in the sub-conscious because in the conscious I am always on my guard The thing is to eliminate it altogether His general mentality was extremely

well preserved and he had an excellent appreciation of his depressed state There was no indication of hallucinations or other grave mental symptoms

Two months after admission he was still in a very depressed state but his fear of injuring others had subsided He said that he did not have proper sleep that his head felt empty and that he wondered whether he would collapse altogether After a further few weeks he improved so much that his relatives decided to try him at home

The patient s father was described as a man of explosive temperament who had always been addicted to alcohol A brother had suffered from an attack of depression from which he made a good recovery

The patient was a nervous high strung child who suffered from night terrors and enuresis He was dux of the school He had a cyclothymic disposition He was bright vivacious bubbling over with energy and had a wide range of interests On two occasions he had reacted excessively to a family bereavement and was depressed His marriage was happy and he is said to have idolised his only child a girl

In 1923 during a period of unemployment he became depressed and was admitted to a mental hospital For eight weeks previous to his admission he had a fear of impending death became mute refused food and was sleepless While in hospital he continued in a mute state and was resistive to attention During the course of several weeks he gradually emerged from his stupor passed through a phase of retardation and depression and eventually made a good recovery

It may be unwise and beside the point to present this case among the stupor reactions but the relationship of manic-depressive states to obsessive thinking is often remarked upon but few cases have been described It is of interest that in this case where we have a history of a cyclothymic personality coming from a cyclothymic stock that the response has been considerably different on the two occasions when mental hospital treatment has been necessary It should be remarked however that on two occasions he responded excessively to family bereavement That excessive response may possibly have a close connection with the preoccupation with death which formed the main theme of his stupor response in 1923 In his present illness the obsessive thinking with the idea that he might injure others is in the nature of a fighting off of the guilt response to an inverted sadistic state

The cases of the stupor reaction which have been reported in this article are far from lending support to Hoch s dictum that apathy is the sine qua non of the stupor reaction There is inactivity resistiveness and negativism but we have no evidence to show that there is affectlessness and interference with the intellectual processes I am convinced that in the majority of cases of stupor the patient passes through a period of anxious tenseness and that the apparent resignation which appears at a very late stage of the stupor reaction

is not the significant feature which it has been supposed to be Furthermore, the interference with the intellectual processes is something which occurs during the stage when the patient is unresponsive, and the impairment of intelligence is far more often apparent than real Many patients, after having emerged from their stupor, may not have a clear recollection of what has occurred but on the other hand, I have known very many who, following recovery, have been able to give an excellent detailed account of everything which has transpired Symptomatically, we have not been able to discover any method by which we can distinguish a benign from a malignant stupor, those which appear benign may later develop malignant and deteriorative qualities, those which seem malignant may make excellent recoveries An analysis of the pre psychotic personality is the safest guide

Mixed States

In addition to the various forms of the manic depressive reaction which have already been described, Kraepelin and his pupil Weygandt, drew attention to the occurrence of what may be described as somewhat anomalous forms which showed a peculiar mixture of depressive and manic features at one and the same time It had always been recognised that quick transitions might occur, that manic patients might appear sad or retarded or quiet and inactive, and that depressive patients might suddenly become elated, overactive and talkative but such transitions usually were short lived and might not even mean that the patient was passing from one to the other phase But in his elucidation and description of mixed forms Kraepelin maintained that certain elements of the manic phase could combine with or replace certain depressive elements and vice versa He took pains to point out that such mixtures occurred essentially as transition phases between circular attacks of mania and depression and that they might persist over weeks or months It is the long duration which has not been sufficiently noted When we think in terms of change or transition we usually think in terms of hours and days rather than weeks and months But while that is so there are other cases in which a certain mixture of depressive and manic elements may be evident from the very beginning of the illness and may never change either into a frank depression or excitement

The varying groups of a mixed nature which Kraepelin constructed are as follows

1 *Depressive or Anxious Mania* In this state, the elated mood is replaced by a depressive or anxious state with, at the same time, the expression of flight of ideas and pressure of activity Such patients exhibit distractibility play on words pun they are busy active write a lot The mood however is anxiously despairing with such symptoms as weeping and screaming in the forefront

2 *Excited Depression* In this form the flight of ideas and over talkativeness is replaced by inhibition of thought In contrast to the poverty of thought there is great motor restlessness Any remarks which are made are usually stereotyped and of a complaining nature there is preoccupation and self absorption The mood is despondent and tearful Occasionally witty snappy remarks may be made Their activity usually is as stereotyped as their speech

3 *Mania with Poverty of Thought or Unproductive Mania* Kraepelin states that this is a very frequent mixture Such patients are perverse evasive snigger and may even give an appearance of weak mindedness There are however considerable fluctuations so that at one time they may be pert quick witted and humoursome while at other times they seem dull and stupid The mood is cheerful they make faces laugh merrily are practical jokers and sometimes destructive

4 *Manic Stupor* In this condition the depressive mood is replaced by one of elation The patient usually is inaccessible refusing to reply to questions making only an occasional remark but on the other hand is full of mischievous tricks without any undue restlessness or emotional excitement There is often an erotic element present occasionally they may express changing delusions

5 *Depression with Flight of Ideas* The above condition is self-explanatory and the only comment which need be made is that it is extremely rare

6 *Inhibited Mania* In this state one has the combination of elated mood flight of ideas but a state of psycho-motor inhibition or retardation

The above symptom-complexes have all been observed at one time or another but usually as transition stages That they may occur by themselves is not to be denied and that they afford evidence of the close interrelationship between states of depression and mania is certain

Kirby has supported Kraepelin s claims and has reported a group of cases confirming to certain of the above categories He particularly emphasises the importance of differentiating such states from schizophrenia

Two illustrative case records are submitted

Unproductive Mania Restless playful elated impulsive Mutism but replies given by nods and signs Inclined to practical jokes Recovery has been slow

A single woman 29 years old a school teacher had been finding her work a strain but she showed no abnormality of speech or conduct until five days before her admission to the Jordanburn Nerve Clinic Quite suddenly she began to talk about her mother who was dead a thing she had never done previously She wished she were with her mother and expressed a desire for death She became agitated wept maintained that she was dying She refused food took no nourishment expressed a desire to make her will Shadows on the wall were described as devils or as representing people whom she knew

is not the significant feature which it has been supposed to be Furthermore, the interference with the intellectual processes is something which occurs during the stage when the patient is unresponsive, and the impairment of intelligence is far more often apparent than real Many patients, after having emerged from their stupor, may not have a clear recollection of what has occurred but on the other hand I have known very many who following recovery, have been able to give an excellent detailed account of everything which has transpired Symptomatically, we have not been able to discover any method by which we can distinguish a benign from a malignant stupor those which appear benign may later develop malignant and deteriorative qualities, those which seem malignant may make excellent recoveries An analysis of the pre psychotic personality is the safest guide

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unmanageable that it was found necessary to certify her She is now making a good recovery

In this case there had been a strong attachment to her sister who had be come engaged and was making preparations to live abroad Her close friend ship with her sister the fact that they slept together and that the patient s spontaneous talk was concerned with her imaginary boy friend and his daily attendance on her may all be considered as psychogenic factors

The acute onset with a frank depression followed by an unproductive mania and a rapid recovery are outstanding The point however is that those not familiar with such states are apt to be impressed with the disorganisation fea tures and are apt to confuse the issue with a schizophrenic state The acute on set good personality and an analysis of the symptomatology should keep one right

Mixed manic state of two years duration ending in recovery Special features were depressive irritable mood with flight of ideas and mischievousness

A young girl 16½ years old a native of Shetland whose mother had had a nervous breakdown at the age of 47 her sister was described as having a nervous disposition

The patient was of a somewhat reserved type but had led an active happy life and had left school when 14 years old At the age of 16 years she seemed to become quieter suffered from a period of amenorrhoea and two months later she became emotional and unstable Then there ensued a period of irritability She accused her father and her sister of influencing her mother against her Her personality seemed to change Her father felt that he was out of touch with her Her attitude was one of suspicion She cried laughed flew into a temper and was unable to concentrate Her mood for a time was one of elation with flight of ideas

On admission to this hospital she appeared preoccupied with her thoughts paid little attention to what was said to her and was irritable Her mood was one of depression and apathy in relation to her home ties but at the same time she was mischievous showed a certain tendency to flight of ideas There was an element of suspicion and she stated that she had auditory hallucinations but did not describe them She was correctly oriented and her memory was good She had little or no insight. A significant report is to the effect that she became erratic and mischievous giving the impression of being able to talk sensibly but making silly replies as for her own amusement Then there ensued a period when she seemed to be out of touch with her surroundings knowing no one except the matron and not speaking to the other patients There was a tendency to deterioration The patient became extremely noisy yelling and singing at the pitch of her voice and was rather dirty in her habits

She became too difficult to control was impulsive and destructive breaking

She had a history of having suffered from a depression six years previously and at that time was off work for three months The family history was negative for nervous or mental illness The patient had been a healthy, normal child with an excellent scholastic record She had been an efficient and successful teacher She was well balanced in her interests, had ample confidence and was "most even tempered"

On admission she was in a restless, over active state, waved her arms winked, screwed up her nose, raised her eye brows and occasionally smiled in an apparently happy, rather infectious manner She was playful and mischievous, was distracted by everything and everyone she saw around her, and while being physically examined, struck the physician in a playful manner She also showed a degree of impulsiveness on one occasion, striking the nurse and on another occasion throwing her dinner dishes at the nurse The prevailing mood was one of humour, but she refused to speak replying only by nods and signs

There were times when her emotional condition varied She wept for instance, when spoken to regarding her mother's death, but the next moment she was laughing happily At other times, she would reply when spoken to but her answers were flippant, and she volunteered that she heard 'voices" telling her what to say She talked about being visited by a boy friend, which was untrue, that she was engaged, that the nurses wanted to learn her secret, that they were jealous of her When she was asked to produce her engagement ring, she replied I think my brain has turned, I do not know what I mean, but I have come to the conclusion that heads are tails and tails are heads If I tell you everything will you let me choose the one I like best? I seem to have been behaving like a fool or mad person ' The play on words, the flight of ideas, the degree of insight conveyed by the above remarks are very significant and reassuring

Again at other times she thought she might be in hospital for experimental purposes that it might be a religious affair but apropos of this she said I never wanted to go in for religion I would rather have been an international rugger player "

Her activity in contrast to the lack of talkativeness, was displayed by her tendency to personal adornment by making paper rings which she placed on her fingers She often lay in bed completely extended with her legs abducted and her feet in the corners of the bed She rocked her head from side to side, listened intently as though to hear voices, and on one occasion she got out of bed and tore down the curtains as the voices had instructed her to do so On another occasion and without uttering a word she collected all the flowers and plants from the corridors and wards arranged them in her room, pulled down the blinds got into bed and eventually said that she supposed it was night Eventually her conduct became so disordered, and she was so interfering and

Mayer Cross has recently made a report on a series of twenty six patients In suggesting possible interpretations he states that changes of clearness and range of consciousness must be taken into consideration It is a little difficult to know what he means but if he implies a certain clouding of consciousness then that is a condition which in my experience does not often exist He refers to Janet s theory of narrowing of consciousness and to Schilder who made self observation" the central point of his theory In general it may be said that the content of thought indicates a turning back or opposition to life as reality — it is an attempt to evade or defend themselves from life as it really is and at the expense of a psychosis they so to speak turn their backs on reality, on life as it really is On the one hand it is clo ely related to hypochondria and to certain anxiety states and on the other to nihilistic delusions

The interpretation of such feelings is a matter of extreme difficulty and at present we are groping H K Johnson has put forward a Gestalt interpretation which has much to be said for it but the intricacies of a philosophical argument are far outwith the scope of this article Johnson however notes that one of the most astounding complaints of these patients is that they cannot even feel sorrow that sadness and sorrow have been lost in the total annihilation of their feelings

Jaspers is quoted ' The feeling that there are no more feelings a subjective stoppage of feeling is a very remarkable phenomenon which appears especially in periodic psychopaths but also in the beginning of all processes An excellent picture of the condition is depicted by one of Brachet s patients also quoted by Johnson e g I have not a moment of comfort and no human sensations Surrounded by all that can render life happy and agreeable still to me the faculty of enjoyment and of feeling is wanting — both have become physical impossibilities In everything even in the most tender caresses of my children I find only bitterness I cover them with kisses but there is ome thing between their lips and mine and this horrid something is between me and all the enjoyment of life etc

Johnson notes that there is often something paradoxical about the picture as they frequently describe their symptoms in a vehement and lively manner show an animated facies out of keeping with the anguish described There is therefore what may be described almost as an incongruity between mood and thought which we usually associate with a more malignant schizophrenic process

The case already reported supports Johnson s contention and another case in point is that of a young married woman of 26 years who was an only child and who since her marriage has made her home with her mother She is described as having been a normal healthy rather vivacious girl, who was perfectly competent in every respect

dishes, tearing her bedclothes and exposing herself Her conduct was of such violence and disorder that she required hypnotics, such as morphia and hyoscin This state gradually passed, and she was well enough to be moved to another ward, but she still continued to be destructive, noisy and, at times, incoherent These attacks gave rise to grave concern, but eventually after a period of about 2 years a gradual improvement set in She became quieter, the noisy outbursts diminished, she began to co-operate and became accessible to ordinary conversation, expressing a desire to return home and saying that she felt better Finally, she was quite pleasant and well behaved, working in the laundry, friendly with the nursing staff and even going out to town with them

When interviewed before discharge, she gave the impression of a well built, good natured, country girl, expressing contentment and satisfaction at the prospect of returning home Her conversation was relevant and connected, and she stated that during the last period when she had been so ill, she had felt greatly strained She denied ever having suffered from any hallucinations

Feelings of Unreality

Special mention requires to be made of a group of cases in which the depressive mood is accompanied by feelings of unreality or depersonalisation rather than by difficulty in thinking or retardation While such states of unreality have always been related to the involutional melancholias yet they are recognised as occurring in earlier years and not infrequently accompany depressions and also schizophrenias Such unreality feelings for convenience can be described as occurring in the allo, somato- and auto psychic fields, e g the flowers do not look real my legs are not legs at all I am not I, I cannot die, etc Mapother has suggested that in those cases in which the environment is implicated the term derealisation is preferable to depersonalisation, the two conditions usually are present together As an example I may cite the case of a young lady who ever since 18 years has at intervals spoken as follows 'I am not like a member of the family I am changed, I have lost myself this is not illness, the only way is to finish my life as I know there is no future for me, the names of the family are unfamiliar to me I am only a pin point" On another occasion she spoke as follows 'Life is like a cinematograph going in and out, I felt something terrible was going to happen if I were wafted away it is all religion I have had to fight all my life I was frightened that I would get like those atheists and I've got ten times worse, you say it is illness, and I do not believe you, I told you my life was clouding up to a pin point'

In the above case the prevailing affect of sadness has not been well sustained She is variable and unstable occasionally may smile quite cheerfully, but the attack is running a prolonged course

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When interviewed before discharge, she gave the impression of a well built, good natured country girl expressing contentment and satisfaction at the prospect of returning home. Her conversation was relevant and connected and she stated that during the last period when she had been so ill she had felt greatly strained. She denied ever having suffered from any hallucinations.

Feelings of Unreality

Special mention requires to be made of a group of cases in which the depressive mood is accompanied by feelings of unreality or depersonalisation rather than by difficulty in thinking or retardation. While such states of unreality have always been related to the involutional melancholias yet they are recognised as occurring in earlier years and not infrequently accompany depressions and also schizophrenias. Such unreality feelings for convenience can be described as occurring in the allo-, somato-, and auto-psychic fields, e.g., the flowers do not look real, my legs are not legs at all, I am not I, I cannot die, etc. Mapother has suggested that in those cases in which the environment is implicated the term derealisation is preferable to depersonalisation, the two conditions usually are present together. As an example I may cite the case of a young lady who ever since 18 years has at intervals spoken as follows: 'I am not like a member of the family. I am changed, I have lost myself, this is not illness, the only way is to finish my life as I know there is no future for me, the names of the family are unfamiliar to me. I am only a pin point.' On another occasion she spoke as follows: 'Life is like a cinematograph going in and out. I felt something terrible was going to happen if I were wafted away; it is all religion, I have had to fight all my life, I was frightened that I would get like those atheists and I've got ten times worse, you say it is illness and I do not believe you. I told you my life was clouding up to a pin point.'

In the above case the prevailing affect of sadness has not been well sustained. She is variable and unstable, occasionally may smile quite cheerfully, but the attack is running a prolonged course.

Shorvon has made an instructive review of a series of 66 cases He has drawn particular attention to the fact that in 61 instances the onset was acute Furthermore he believes that it occurs most typically in adolescence or early maturity that it is related to the occurrence of migraine and obsessional states and that the course of the disorder is towards recovery

In contrast to Shorvon s findings I would mention that I cannot entirely confirm the acute onset because I have known many cases in which the onset was slow rather than rapid Taking everything into consideration however it is true that even although the course of the illness may be long yet there is always a tendency to recovery The relationship of such states to déja vu or the dreamy states described by Crichton Brown (Lancet 1895) have not been emphasised sufficiently Tennyson must have sensed or experienced the condition when he wrote —

> Moreover something is or seems
> That touches me with mystic gleams
> Like glimpses of forgotten dreams
> Of something felt like something here
> Of something done I know not where
> Such as no language may declare

It is also of interest to record that Sir Walter Scott in his Journal February 18 8 wrote as follows —

Yesterday at dinner time I was strangely haunted by what I would call the sense of pre existence a confused idea that nothing that passed was said for the first time that the same topics had been discussed and the same persons had stated the same opinions on the same subjects The sensation was so strong as to resemble a mirage in the desert or a calenture on board ship when lakes are seen in the desert and silver landscapes in the sea There was a vile sense of unreality in everything I did and said It makes me gloomy and out of spirits The bodily state which most resembles this unpleasing hallucination is the giddy state which follows profuse bleeding when one feels as if walking on feather beds and could not find a secure footing I think the stomach has something to do with it I drank several glasses of wine but these only augmented the disorder

It is a pity Sir Walter s experiment was so disappointing — it might have been a pleasant way of dealing with a group of symptoms which still defy understanding and successful treatment

Five years ago after listening to a story regarding a burglary during which the remark was made that someone might have had her throat cut, she became nervous and upset, her mind seemed to be filled with forebodings and she lost all confidence She now feels that since then she has never been well She improved so much, however, that she was able to marry and have a child of her own For the past year she has been very unstable At times she has felt as if she might be able to control her thoughts and feelings but at others her mind is filled with doubt, indecision and insecurity She sometimes looks at her mother and says ' Mother, I hardly know who you are" These feelings of unreality also involve herself She feels as if she was not a person at all and talks as follows Life is so funny, I look at things and I cannot realise them I am not real, I am nothing, nothing at all, I go about in a dream, I feel I do not know who my husband is or who my baby is, I feel that I am not a person at all, I ve got beyond being frightened for anything the wool I knit with seems strange, and as for reading I don't know that I can read" While describing the above symptoms she was in a state of apparent anguish, wept bitterly, pulled at her handkerchief and was distraught During the course of the interview she came up to a much better level laughed and smiled, but then again easily became self absorbed and tearful The above described fluctuation in mood is in the writer s experience a very striking phenomenon of the unreality states occurring at an earlier age than the involutional cases but it should not necessarily raise the question of a schizophrenic state as suggested by Johnson There is not so much an incongruity of mood as a rapid fluctuation of mood which is adequate enough for the time being The mood change reminds one more of the quick change which occurs in the temper tantrums of childhood

Johnson talks in terms of mood fringe", a new qualitative dimension in consciousness which is referred to as *richness flatness*, which is intelligible only when considered from the configural point of view of the Gestalt school Loss of feelings as a morbid symptom is explained as a sudden and massive dropping out of mood shapes Lewis in his article gives an interesting discussion but does not offer any explanation The unreality state is not something by itself but has connections with the affective state, with consciousness (bewilderment muddle, impression of mystery and confusion, dream like state), with memory, ability to recall images with vividness experience of time, individual relationship and perhaps also with actual perception

Hadfield thinks of people who suffer in this way as originally of strong personality, passionate, self willed sexual, but the personality becomes crushed and repressed and upon it is superimposed a personality which is not theirs The personality they acquire is fictitious Bleuler admits that he is not clear either as to mechanism or causes

Involutional Melancholia

The question as to whether those cases which we term involutional melancholia should or should not be included under the broad grouping of the manic depressive psychosis is still unsettled. Some contend that such cases conform so closely to one of Kraepelin's mixed states that no useful purpose can be served by making any differentiation; others, of whom the writer is one, believe that there are certain distinctive features more or less peculiar to involutional melancholia which warrant a separate nosological category. It may be remembered that when Kraepelin first formulated his conception of manic-depressive, dementia praecox and other functional states he kept cases of involutional melancholia apart and reserved for them the general term of *melancholia*. A few years later, in 1907, one of Kraepelin's pupils, Dreyfus, published a monograph on the subject and came to the conclusion that melancholia was not entitled to the dignity of a nosological entity. Dreyfus reviewed Kraepelin's cases and found that a large number of those who had been considered as enfeebled or demented had made a good recovery, and that the majority of those who had not recovered were suffering from a coincidental cerebral arteriosclerosis. Furthermore, Dreyfus showed that in a number of cases subsequent attacks had occurred sometime of a manic nature, and that the fore-history usually contained a statement of emotional variation and fluctuation. Altogether Dreyfus subjected 81 cases to investigation, and of those 34 were personally examined and 39 died. With the exception of 6 cases he considered that all the others were examples of the manic-depressive psychosis. Of these cases 66 per cent recovered, 8 per cent were probably arteriosclerotic, and 5 per cent died either of some intercurrent disease or as a result of suicide. Kraepelin approved and concurred with the findings of Dreyfus.

The writer, while recognising the close affinity which exists between manic-depressive and involutional states, has never been convinced by the Dreyfus-Kraepelin formulation that the two conditions are part and parcel of the same

anxiety a feeling of unreality and hypochondriacal and nihilistic delusions in the allo somato and auto-psychic fields

It is undoubtedly true that women are more frequently affected than men but in any case the usual history is that of men and women often the very salt of the earth who have led austere and practically blameless lives De pression at the involutional period is more common than at any other period of life

Symptomatology of Involutional Melancholia — It is hardly necessary to enter into a detailed discussion of the symptomatology because both in their milder and more severe degrees such cases are well recognised in the practice of every doctor Every mental hospital has many of them The outstanding feature is the condition of anxious depression usually accompanied by great motor rest lessness and insomnia In such a state strong men may weep and sob like children their demeanour and attitude is one of terror and misery they feel unable to look their fellow men in the eye they bury their heads in the bed clothes fling their arms about wish to be left alone They complain of great tiredness are easily fatigued lack concentration and feel that they have failed and have been defeated in their efforts to cope with life Physically they may complain of headache usually on the top of their head feelings of pressure a sense of constriction across the chest flushings and vertigo

As the condition progresses the symptoms become more pronounced They are certain that the most horrible fate awaits them they will not be allowed to die a natural death but will be made to suffer the tortures of the damned no penalty will be too severe because of the terrible and heinous crimes which they have committed and not only themselves but their relations and friends and even the whole world will suffer because of them They seem almost to take a delight in gloating over the details of what may be expected In some cases the sense of depersonalisation and derealisation reaches a tremendous pitch They are not human any more their bodies have been changed everything has been so changed that nothing is as it used to be Their delusional ideas may involve every system of their body their hearts kidneys bowels lungs eyes their sensations are all changed and distorted to such a degree and in such a manner that they believe that there is no possibility of reconstitution Almost invariably they complain of intractable constipation and any bowel movement which takes place is considered totally inadequate One gentleman of my ac quaintance always complained bitterly that his bowel movement was no larger than the calibre of a cigarette On account of their disordered bodily sensa tions they may and often do refuse food so that they require to be tube fed they may attempt to mutilate themselves or commit suicide

While the affect is well maintained we do not worry too much about the probable outcome even when the bodily delusions are of a bizarre character

disease process The fact that involutional melancholia is being discussed at this point must by no means be taken as implying that it is only a phase or mixed state of the manic depressive grouping, it is discussed here only to facilitate discussion on psychopathology, diagnosis, prognosis and *treatment* It may be quite true, as Dreyfus has stated, that involutional melancholia may subsequently be followed by manic attacks and that the fore history shows a state of emotional fluctuation and variation, but those findings are by no means the rule On the contrary, they are rather the exception than the rule Manic attacks following involutional melancholia must be very rare it is much more usual for melancholic attacks to recur, and this is in line with the finding that the fore history of involutional melancholias does not usually contain a statement of emotional fluctuation, but rather the description of a rigid, over conscientious rather consistently gloomy or serious minded type For those reasons and because it is believed that the clinical symptoms and course are likewise sufficiently distinctive, it is still believed that involutional melancholia has distinctive features which warrant separate consideration and differentiation

The involutional period, roughly, may be said to extend from the age of 40 to 55 years in women and from the age of 50 to 65 years in men It is the time when the body-chemistry changes, when the glands of internal secretion begin to fail when the bodily processes decline and the organism fails The person loses his elasticity and vigour, he can no longer adapt himself easily to these new events and situations in his life which entail stress and strain Life loses a little of its savour and romance so much so that some one described the climacteric as the smouldering fire of the endocrines in which, from time to time, certain embers flare up emit sparks and subside into cold ashes While we know and appreciate that the physiological disturbances are of great importance the psychological mechanisms are of equal, if not greater, importance The involutional period is crammed full with the might have beens, regrets reproaches, *self pity*, the trivial misdemeanours of the past assume gigantic proportions, and the future offers no hope for suitable atonement

The involutional period may be thought of as a further epoch in development when new adaptations physical and mental, require to be made, and those, whose nervous systems have already been strained to the breaking point are no longer able to put up a stout resistance Trifles, petty worries and difficulties of all kinds loom large feelings and thoughts which have been carefully repressed and apparently forgotten come uppermost and often find expression in crude sexual beliefs and ideas When such a conflict of interests exists then fear and apprehension feelings of guilt and conscience insomnia, suicidal impulses and delusional ideas become predominant In fact the involutional psychosis may be defined as *a state of depression without retardation, but with*

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her hand nervously against her mouth Occasionally she will support her head on her knees Her expression is one of fretful unhappiness Questioned she hangs her head and protests in whimpering tones that there is nothing wrong with her mentally The affect is one of depression but the general picture reminds one of a state of peevish hypochondria without great depth of feeling She is especially preoccupied with the condition of her tongue throat and kidneys She says that these organs are decaying away and believes that her breath is so foetid that she is infecting the whole ward with her disease She says ' My kidneys are all decaying and my mouth and throat are all decayed — I am sore all over — it would be better if I got home — I don t want to stay here because I don t want to see people — these marks on my legs are not natural — they are not ordinary bruises — they re all over me — I have had festering throats two or three times since I was a child and once it burst and I got a bowlful out of it (true) This is not the same thing because it is going on all the time I used to feel something going round in my head like chords going through me — it doesn t feel so bad now I said nasty things to my brother but I want to tell him it isn t true to ask him to forgive me — I feel sorry about it and want to get home

The above spontaneous description gives a good indication of the type of symptoms from which such patients suffer The essential element is the depression of an agitated type with hypochondriacal and nihilistic delusions regarding her bodily organs

Her orientation and memory are excellent She does not believe that she is suffering from a mental illness but that she is being punished for failing to carry out her responsibilities

This patient comes from a good stock When a child she suffered from a throat abscess At school she was clever but in her disposition was reserved conscientious easily hurt As a teacher she was ordinarily successful Her periods started when 17 years old and ceased when she was 47 years old She had never been interested in the opposite sex had never given the possibility of marriage a thought

One year previous to admission and just at the time her periods ceased she began to feel restless and over worked At home she had an invalid mother and her brother to look after She seemed to see little lumps on her tongue her speech seemed to be affected she became apprehensive She developed a choking feeling felt as if she could not eat She became more and more convinced that her throat was decaying and latterly refused to take food altogether

From the point of view of subjective analysis the patient is quite uncooperative and inaccessible Her disordered oral and kidney sensations are the dominating trends In a case such as this where the affect is not of any great

but if the patient becomes stereotyped in his speech and actions, if the affect dwindles, and if he continues to express bizarre hypochondriacal bodily delusions the condition becomes infinitely more serious Such cases often throw up an interesting contrast between their disordered emotional state and the excellent preservation of their intellectual state When they can be distracted from their fears and foreboding they can discuss business and world affairs with splendid judgment and discrimination

Various attempts have been made to separate involutional states into different categories of varying severity, but such exercises are more of academic than of practical value Kirby for instance differentiated four main groups 1 Cases showing a simple form of anxiety or general uneasiness apprehensive anticipations, with or without ideas of sin 2 A severer form showing anxiety with fear, perplexity and allo psychic concepts 3 Cases presenting a sensory somatic complex abnormal bodily sensations, hypochondriacal trends and feelings of unreality 4 Cases developing with arteriosclerosis

In a more or less similar manner Farrar describes a "melancholia vera', a self accusatory state with clear consciousness "anxietas præ senilis', an allopsychosis with anxiety and unreality feelings, "depressio apathetica', a condition in which affect is wanting McCurdy in 'Psychology of Emotion' attempts to align some cases with the manic depressive psychosis and others with schizophrenia and constructs the following groupings, 1 Ridiculous delusions insufficient emotional reaction, anti social conduct, indulgence in infantile sexuality This is probably a schizophrenic reaction type 2 Hoch s organic insufficiency characterised by lack of interest, apathy, mild hypochondriacal ideas and mild restlessness 3 Cases that are simply another recurrence of a manic depressive state 4 Cases with fear of impending death of poverty, and of bodily disease, this last is termed true involutional melancholia

The above differentiations are all extremely arbitrary and superficial subdivisions, which are for the most part not valid as in every case there are shades of difference which, if one wished, one could place in individual categories There is far too much dovetailing in grades of mental states to allow of such individual treatment

Involutional Melancholia slow onset in woman of 48, one year after menopause Reserved, rigid personality Restless, agitated with hypochondriacal and nihilistic delusions referred to mouth and kidneys Peevish state with shallow affect and no insight

An unmarried woman, 48 years old, a school teacher, in August, 1935 was admitted to the Royal Edinburgh Hospital for Mental Disorders

The patient is a thin middle aged woman with sunken eyes and drawn face She sits upright in bed picking at her fingers, smoothing her hair, or pressing

on her for all things if the parents quarrelled he always sided with his mother During her last illness he nursed her with tender devotion

The mechanism of this case is relatively clear He has a feeling of guilt which may be partly attributed to a venereal infection contracted previous to marriage This fact was known to his mother but not to his wife and further he was inclined to confide in his mother more than in his wife His mother s death precipitated a crisis he recognised for the first time what his attitude to his wife really was that he had confided in his mother rather than in his wife A sensitive idealistic rigid type of personality such as his could not bear to think that he had in any way cheated his wife His suppressed feeling of guilt got beyond his control and attached itself to a trivial remark which he had made in the past, but in which he had sided with his mother rather than with his wife He may have been expressing an unconscious wish never to be parted from his mother and left alone with his wife

Many other case records could be submitted in detail in illustration of the varying types of symptomatology which appear but it will be sufficient to give extracts only from a few others For instance a single woman 54 years old has been in hospital for nine years The important features in her case are her ideas of unreality There is no meaning in anything at all I should be into dead space I am all different from what I used to be I thought I would not know how much to eat I have no desire for anything I felt like this and jumped into a sea of dead space I thought the world was too big and that I could not live anywhere

A single woman 54 years old when her periods stopped thought she might be pregnant consulted a woman who succeeded in selling her a box of pills and at the same time made her swear that she would never tell where she had purchased them She became greatly distressed and agitated and then as her depression increased she flung herself about thumped her pillows with her fists and pressed her hands desperately against her eyes Her soul she said was lost and her conscience haunted She cried out I m frightened to meet God because of the sin of my soul — Christ died on the Cross and I have broken *His commandments It seems as if God spoke to me saying Depart from me* all ye workers in iniquity She made a good recovery in a few months

A man 61 years old an efficient farmer a reserved man of sound principles became so sleepless and depressed that he cut his throat He was suspicious and deluded believed that his food was doped that the nurses were giving him what he calls drying up medicines to make him constipated that injurious substances were sprinkled over his bed and pyjamas that gas was blown on him when he slept He was quite impervious to help or reassurance

A woman 44 years old who had graduated from the University with honours in French and German and had been a successful school teacher was de-

depth, and where the patient is so inaccessible even to reassurance, the future cannot be looked forward to with any sense of security as regards recovery

Involutional Melancholia Slow onset of several years duration in a man 56 years old Affect is dwindling and tendency to become stereotyped in his remarks Strong mother fixation Guilt feelings determined by conscious and unconscious factors No indication of improvement after three years treatment

A married man, 56 years old, has been under mental hospital treatment continuously for approximately three years At present his condition is one of unrelieved misery and depression in which he asks to be reassured "Are you sure I will be all right, doctor?" has become a stereotyped phrase He is restless, agitated and expresses many delusions He believes that a dreadful calamity is impending which will involve not only himself but also his wife and family He states that his body is diseased that his eyes have disappeared, that he is a complete wreck and will try to commit suicide whenever the opportunity presents itself Intellectually he shows no defect

The family history is negative for nervous or mental illness The patient had been an extremely efficient business man, who had taken an interest in public affairs He was always most conscientious, reproached himself for the smallest fault and was inclined to be pessimistic He has been married for 30 years and has two children Several years previous to marriage he had contracted venereal disease, and although adequately treated, he developed a sense of shame and guilt which he was never able to live down

His mother died in 1929, and five months later symptoms of nervous anxiety began to show themselves He had been deeply attached to his mother, she lived in his house for two or three years before she died About a year before she died in a moment of irritation following a domestic tiff he had remarked that he and his mother would be better dead When this remark came back to his mind it troubled him greatly he thought it was a very cruel thing to say He even connected the remark with his mother's subsequent death He became depressed was anxious and brooding, and when a friend developed a stroke, he thought he was responsible, because just previously he and his friend had had a difference of opinion He then recalled that shortly before his mother s death he had had intercourse with his wife This struck him as very shameful and the idea occupied his mind to such an extent that within a week he had found it necessary to unburden himself to four different people This made things worse He had a strong feeling of guilt in relation to his wife such an intimate fact should never have been told to an outsider He had, also never told his wife regarding his early venereal infection

The predominant feature was a very strong mother fixation. He depended

on her for all things if the parents quarrelled he always sided with his mother During her last illness he nursed her with tender devotion

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scribed as being of a proud temperament, independent, immaculate in dress and over conscientious In her psychosis the picture presented is one of intense agitation with great restlessness and impulsiveness She describes herself as so wicked that the green van" is waiting at the door to take her to the place of execution so that her sins may be expiated

A married man, 66 years old, shows a state of profound depression and agitation on account of ' unconscious masturbation", which troubled him in boyhood He suffered from sleeplessness, loss of appetite and ideas of suicide Auditory hallucinations have also been prominent, he hears himself called opprobrious names, e g , masturbator He believes that he passes fœcal matter on the floor which the nurses clean up before he wakes

A lady 54 years old, expresses depressive ideas of a fantastic nature For instance she states that something is put on her head to make her hair come out, that her teeth will soon be affected in the same way Everyone she sees seems to be impersonating some one else She calls me by name, but is sure that I am not who I seem to be Even her husband, when he calls, is not really her husband but some one else masquerading Everything outside is changed—the trees the flowers, the birds are all different She is sure that a film is being made of her that the whole place is full of mirrors—"all my clothes have been changed almost imperceptibly, but sufficient for me to recognise You are not the same Dr Henderson who was here the other day You must be part of the film company I am just desperate—my trunk—my clothes are all changed and the things in them They are putting horrible stuff into the tooth brush and the water—I want to get away (and then very characteristically) *and yet I don't know* Everything is full of dope to make me act as strangely as possible" She is sure that people enter her room at night time (she has a special nurse), and that she is assaulted sexually She exhibits marks on her legs which she believes are evidence of what she is subjected to

These cases could be added to endlessly, but the point which I wish to emphasise especially is that at the involutional period we have a group of patients, men and women, breaking down for the first time with an affective state which runs a long course They are people who have had rigid inelastic, sensitive proud over conscientious temperaments, and who have not, as a rule, shown emotional fluctuations so common in the manic depressive states, but rather have had a much more consistent mood change Recurrences occur, but again are much more infrequent than with manic depressives

This group of involutional melancholias differs so greatly from the manic depressive that we are justified in keeping them apart, even although cases occur which indicate that the two conditions have features in common The close contrast which exists between this group and states of chronic mania has, already, been remarked on

Fear and Suicide

These two factors occupy such a prominent place in the majority of depressive states that they demand special consideration Their importance and their close association cannot be over emphasised

The term *fear* is used as being synonymous with morbid anxiety a state of distressful apprehension It is probable that the power and significance of fear was realised by essayists and novelists long before medical opinion took much notice of it Here for instance is what Montaigne says I myself have seen very many become frantic through fear I omit the vulgar sort to whom at one while it represents their grandsires risen out of their graves in their shrouds anotherwhile hobgoblins spectres and chimeras but even amongst soldiers the sort of men over whom of all others it ought to have the least power how often has it converted flocks of sheep into armed squadrons reeds and bul rushes into pikes and lances friends into enemies the French white cross into the red cross of Spain Sometimes it adds wings to the heels sometimes it nails them to the ground and fetters them from moving The thing in the world I am most afraid of is fear that passion alone and the trouble of it exceeding all other accidents

Hudson in Far away and long ago describes how Mr Trig the school master spoke at the burial of an old favourite dog That is the end Every dog has its day and so has every man and the end is the same for both We die like old Cæsar and are put into the ground and have the earth shovelled over us When Hudson heard the above words he describes how they sank into his heart how they appeared terrible incredible and it was only after he had it explained and had grasped the idea that the part that really mattered myself — the I am I which knew and considered things would never perish that sudden immense relief was obtained

The above descriptions indicate how one s inward thoughts and feelings can inflict great mental suffering and distress and how it is fear for ourselves which can play greatest havoc with our lives How often I have heard patients ex claim that they have felt afraid all their lives and how often investigation shows that their afraidness has been determined by their up bringing and training by being exposed to domestic disharmonies many of which might have been easily avoided As we grow older our fears become more specialised and may relate to specific objects or conditions We fear water sharp instruments precipices some are uncomfortable in closed places others in open places there is a dread of illness of contamination of death There is no end to our morbid expec tations

From the more specialised angle of nervous and mental illness fear both as a cause and as a symptom has never received sufficient recognition It is true

scribed as being of a proud temperament, independent, immaculate in dress and over-conscientious In her psychosis the picture presented is one of intense agitation with great restlessness and impulsiveness She describes herself as so wicked that the "green van" is waiting at the door to take her to the place of execution so that her sins may be expiated

A married man, 66 years old, shows a state of profound depression and agitation on account of "unconscious masturbation", which troubled him in boyhood He suffered from sleeplessness, loss of appetite and ideas of suicide Auditory hallucinations have also been prominent, he hears himself called opprobrious names, e g , masturbator He believes that he passes fœcal matter on the floor which the nurses clean up before he wakes

A lady, 54 years old, expresses depressive ideas of a fantastic nature For instance she states that something is put on her head to make her hair come out that her teeth will soon be affected in the same way Everyone she sees seems to be impersonating some one else She calls me by name, but is sure that I am not who I seem to be Even her husband, when he calls, is not really her husband, but some one else masquerading Everything outside is changed—the trees, the flowers the birds are all different She is sure that a film is being made of her, that the whole place is full of mirrors— all my clothes have been changed almost imperceptibly, but sufficient for me to recognise You are not the same Dr Henderson who was here the other day You must be part of the film company I am just desperate—my trunk—my clothes are all changed and the things in them They are putting horrible stuff into the tooth brush and the water—I want to get away (and then very characteristically) *and yet I don t know* Everything is full of dope to make me act as strangely as possible" She is sure that people enter her room at night time (she has a special nurse) and that she is assaulted sexually She exhibits marks on her legs which she believes are evidence of what she is subjected to

These cases could be added to endlessly, but the point which I wish to emphasise especially is that at the involutional period we have a group of patients, men and women breaking down for the first time with an affective state which runs a long course They are people who have had rigid inelastic, sensitive, proud, over conscientious temperaments, and who have not, as a rule, shown emotional fluctuations so common in the manic depressive states, but rather have had a much more consistent mood change Recurrences occur, but again are much more infrequent than with manic depressives

This group of involutional melancholias differs so greatly from the manic depressive that we are justified in keeping them apart, even although cases occur which indicate that the two conditions have features in common The close contrast which exists between this group and states of chronic mania has already been remarked on

out of her head her features became distorted perspiration exuded from every pore During such a state she jumped out of bed made a bolt for the door or window in order to escape torture herself or to render help to others Not infrequently an exhausting struggle ensued followed by a flood of tears and apologies for having been so difficult This condition occurred spasmodically but was more or less persistent for a good many months She was never sure that she would be safe always certain that some harm was imminent. Her fears entered into her activity Owing to her fears she on several occasions made determined attempts to commit suicide

Frequent references have already been made to the fact that suicide is one of the symptoms of the depressive state to which particular attention must be paid We have been in the habit of teaching that every case of depression no matter how mild must be considered as a potential suicide and that adequate measures must be taken to prevent its occurrence The only certain way to do so is to have the patient under constant observation night and day and even then the patient may succeed in his attempt There are however certain patients suffering from depressive states with whom we have to take a certain amount of risk and not emphasise the supervision and policing too greatly Otherwise we may precipitate the tragedy which we are all so anxious to avoid There are no rules which can be laid down as to whom one should supervise and whom one should treat with greater freedom and those of us with the greatest experience often make serious errors but we comfort ourselves with the reflexion that perhaps we would not have had so many successful recoveries unless we had taken what we considered were justifiable risks If we can establish good co-operation with our patients so that the tendency to suicide can be fully and freely discussed we have much less fear of suicide being attempted than in those cases who even when depressed deny all thought of self-destruction The problem of suicide however is not so much a psychiatric one as a huge socio-medical one which requires greater social and medical publicity In the great majority of so-called civilised countries suicide has been increasing at an enormous rate Here in Scotland the suicide rate has doubled since 19 1 while in the United States Dublin has reckoned that upwards of 22 000 suicidal deaths occur per annum Up until now we have accepted suicide as a social phenomenon which must be borne with as complacently as possible while psychiatrically we have never taken the trouble to tackle it except by safeguarding those patients who are under our care in mental hospitals The problem is not so much with our mental hospital patients as with those mentally unstable depressed afraid people who permeate every rank of society and are not considered ill enough either to receive mental hospital treatment or the services of the psychiatrist Suicide and insanity which is certifiable are not by any means synonymous terms but suicide and unsoundness of mind are so inex

that sadness, difficulty in thinking and retardation may be the cardinal symptoms of the depressive reaction but fear has often been the determining emotional factor, and it is sometimes because of the continuance of fear that the illness takes so long to resolve It is the expectation of failure, the idea of defeat constituting the instinct of fear, which dominates our lives more than any other single force We fear for ourselves, for our future, for the opinion that others may hold of us, for our conduct in an emergency, for our health for our sanity Under the stress of such imaginings and misgivings, a lack of confidence is bred which leads to increasing sensitiveness, to insomnia and maybe, to self destruction Because of such fears men consider themselves outcasts unfit for human society, as wicked criminals meriting the most condign punishment

Under such circumstances we can readily agree with Jones when he states that morbid anxiety is the most frequent single symptom in psychopathology and perhaps in all medicine "It is the Alpha and Omega of practical psychiatry " The association of sleeplessness — caused maybe by the fear of death — and suicide is particularly close

A powerful passage from George Moore's novel "Evelyn Innes" may be used as an illustration "It had struck eleven — that was the hour for her going to bed, but the hour had become a redoubtable one Bedtime filled her with fear and the thought of another sleepless night deprived her of all courage She did not dare to go upstairs She sat in her armchair as if in terror of a mortal enemy Since dinner, the temptation to commit suicide had been growing in her brain like a vulture perched upon a jag of mountain rock she could see the temptation watching her its beak was in her brain, and she was drawn, as if by talons, tremblingly from her chair Lying on her pillow, she could think of nothing but the slim bottle and the slim blond cork and a thick, white liquid and the dark river into which she would sink, the winding darkness on which she would float, and she had not the strength to think whither it led 'Sleep I must have, sleep, sleep sleep!' she muttered as with fearing fingers she emptied out the contents of her work box where odds and ends collected It was her scapular that came up under hand and at the sight of it all her mad revolt was hushed and a calm settled upon her"

As an example of fear complicating a more definite psychotic state, take the following

A lady, who was being treated in a nursing home thought that the home was a convent that the people in it were Spaniards and Japanese, that she would suffer great tortures She was very restless and agitated Any noise, such as a door shutting someone talking a bell ringing suggested at once the terrifying idea that someone was being tortured, that children were being hurt in the kitchen

The condition produced was one of great terror Her eyes seemed to start

workers and a population which itself may take a practical interest in the problem with which we are dealing

Psychiatrists themselves require to contribute their bit and must see to it that adequate psychiatric teaching particularly in relation to causation and to the early symptoms and signs of nervous and mental illness is instituted The fact that psychiatry can now be placed before the student as a live affair of absorbing interest is leading to the training of general practitioners on whom more than on anyone else the welfare and health of the community depends who are really interested in the psychological needs and difficulties of their patients and thus are better equipped to deal with them We need a mental health programme which will take into consideration every factor which may conduce to mental health and happiness so that a state of social solidarity is produced where every man has an equal chance with his neighbour The safe guarding of the means and methods employed to effect suicide can never be successfully accomplished but in any case that is the minor issue in a very much bigger problem

Physical Symptoms

There are no physical symptoms which can be considered as specific to affective disorders Patients suffering in such a way are no more prone to any form of bodily disease than the average members of the community Any physical change which does occur apart from a coincidental physical illness is secondary to the mental symptoms In both manic and depressed patients sleeplessness and emaciation are of outstanding importance and may be among the first symptoms exhibited In consequence the patients health may suffer to an alarming degree so that life itself becomes endangered The manic patient is so restless and excited his mind is so full of new projects and ideas that he has no more time to sleep than he has to eat the depressed patient is so full of gloomy forebodings and feels so unworthy that he does not consider that he is entitled to the food which is offered him and may carry his refusal so far that he requires to be tube fed The fact that his general health becomes so devitalised renders him much more susceptible to intercurrent infections and to whatever may be latent in his system e g tuberculosis Many depressed patients express an actual distaste for food and may complain of a sense of fullness in the abdomen and of constipation In such cases there is a sluggishness of the gastrointestinal tract Henry particularly has shown that 68 per cent of depressed patients having barium meals retain barium or food residue over a period longer than five days Under these circumstances superimposed toxic symptoms are not uncommon and may be evidenced by an increase in temperature and pulse rate Apart from this however we have no evidence to support the doctrine of focal sepsis in relation to the affective disorders

tricably involved as not to be separable Although the unsoundness may not need mental hospital treatment, it might be considerably helped by the services of the skilled psychiatrist Neither the public not the medical profession generally appreciate that point They are still imbued with the idea that the psychiatrist is the person who wants to lock everybody up in his asylum or mental hospital and fail to appreciate that the psychiatrist's real job is to keep people out of the mental hospital rather than to take them in We are unable to explain why the suicidal rate should be showing such a great increase We are apt to blame the pace of present day life, the struggle for existence and the difficulty of adaptation to modern social conditions The real explanation probably lies much deeper and can only be determined by the close analysis of huge groups of carefully taken case records Superficially it seems clear enough that life is held much cheaper, it is more selfish, more individualistic, so that each man feels that there is no reason why he should not do with his life as he thinks best He does not now think in terms of God, his country, his family honour, as he used to do, but has developed an individualistic philosophy which thinks of himself first The position is a little like that of "every man for himself and the de'il tak' the hindmost"

Medically we can only take the view that those who attempt to commit suicide are people who are suffering from severe emotional conflicts which may be consciously or unconsciously determined If that premise is granted, then suicide is essentially a problem of preventive medicine, which the psychiatrist must help to solve But to come anywhere near success, the psychiatrist requires the help of the general practitioner and of all constructive social and environmental organisations The psycho analytic school have advanced the view that all suicides are explainable on the basis of unconscious motivation, e g, inverted sadism, but that opinion quite fails to take into account the varying complexities in different countries in different cities of the same country, the marked seasonal incidence and the strong hereditary or constitutional bias Furthermore, even although we may feel that we understand the psychopathological mechanism determining the suicidal attempt, yet we must recognise that the therapeutic application of such principles is quite outwith practical politics For a number of years I have been greatly interested in this matter of the social and individual prophylaxis of suicide and have formed the opinion that the most satisfactory method to deal with it is by an educative campaign directed towards informing the public regarding the principles of mental hygiene We require to develop a social psychiatry which has for its aim the improvement and organisation of protective, helpful, environmental agencies, but also the resistance adaptability and healthy mindedness of the individual We need more well trained psychiatrists more general practitioners who are alive to the psychological factor, more specialised clinics and hospitals, more efficient social

workers and a population which itself may take a practical interest in the problem with which we are dealing

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In relation to the circulatory system there are no factors of special importance. The pulse rate may be increased in mania in relation to the restless excitement; it may be slightly decreased in depressive states, but we have no real evidence to indicate a change in blood pressure either in relation to mania or melancholia. In depressive states a transitory glycosuria is seen, and particularly in the involutional cases there may be complaints of flushing, vertigo and excessive perspiration. The menstrual function usually disappears transitorily during the course of any acute mental illness.

In recent years psychiatry has enlisted the help of the bio-chemist and numerous intensely interesting experiments have been attempted with a view to elucidating the metabolic disturbances which may be at work. We are still far from being able to speak with any certainty, there are too many factors which are unknown, but suggestions have been offered for further work which are worth following.

McCowan and Quastel believe that the closest parallelism exists between the magnitude of the hyperglycæmic index and the emotional tension of the patient. They found that only 10 out of 43 melancholic patients gave a normal or slightly abnormal index. When the index was low, they postulated the possibility of the psychosis being complicated by a hysteroid element, when high, that it was because of emotional tension.

In manic states and in benign stupors a low index is obtained, and this is considered an indication of lowering of emotional tension. They are so certain of the importance and constancy of their results that they are of the opinion that the state of the index may be used as a guide to prognosis and to discharge. Strom Olsen and others have shown that in every case due allowance should be made for under-nutrition, for the presence of organic diseases and for the emotional state of the patient when the test is performed.

Another interesting line of research is in relation to the ratio of distribution of bromide between the blood and cerebrospinal fluid. In normal persons the blood is said to contain about three times as much bromide as the cerebrospinal fluid, and thus a ratio of below 2.8 is indicative of an increased passage of bromide into the cerebro-spinal fluid, while a determination above 3.2 indicates that less than the normal amount has reached the cerebro-spinal fluid. The presence of intercurrent diseases, e.g. vascular brain disease, toxic processes, must be allowed for. Rothschild and Malamud studied 100 cases of manic-depressive psychosis and 28 cases of involutional melancholia. There were 54 depressions and 46 manias. In 41 depressed patients with no complicating physical factors there was an increased passage of bromide into the spinal fluid in 41.5 per cent. of this group. Three patients, constituting 7.3 per cent. of the cases, showed increased distribution ratios; there were left 51.[illegible] per cent. of cases with determinations falling within normal limits. Of 4 uncomplicated

manic cases normal results were obtained in 54 8 per cent of the cases Of the involutional cases there were 23 uncomplicated by physical disease In 8 cases or 34 7 per cent of the total distribution ratios were below 2 8 In 56 6 per cent the determinations were within normal limits Only 2 cases or 8 7 per cent exhibited high ratios More specifically Rothschild and Malamud found that high bromide determinations were apt to occur in patients who were subject to recurring attacks such patients generally remained in a mildly hypomanic or depressed condition during the intervening periods The ratio moved in the direction of normal as the psychosis subsided They suggest that this method may be of practical use in differentiating manic-depressives from schizophrenics

Along the same lines *Zondek* and Bier investigated blood bromine and found that the normal amount of bromine is very constant being between 0 1 to 1 mgm per 100 c c of blood In 40 cyclothymics they found a hypobromæmia in 35 instances They suggested that the pituitary gland contained 10 to o times more bromine than the other tissues the anterior lobe was specified The floor of the third ventricle was said to contain three times more bromine than the other portions of the brain and they suggested the existence of a neurotrophic bromine hormone of the anterior lobe of the pituitary passing from this gland to the mesencephalon by the portal venous diencephalo-pituitary system

Quastel and Yates criticise the above work and point out that Zondek and Bier used a method of bromine estimation which is untrustworthy Quastel and Yates have made it clear that the bromine of blood varies very greatly among cases of mental disorder but such variation occurs also in normal people especially among women In their general summary they state that 1 the rate of removal of bromine from the blood after intravenous injection of sodium bromide is independent of the mental state Variation in the initial blood bromine levels found both in normal and mentally abnormal cases cannot be attributed to differences between the rates of removal of bromine from the blood into the tissues 2 After oral ingestion of sodium bromide the blood bromine rises markedly in all patients independently of the mental state Low blood bromine levels found in certain psychotic patients cannot therefore be ascribed to lack of absorption of bromine into the blood stream 3 Bromine may appear in the gastric juice in concentrations greater than that in the blood 4 During the process of digestion blood bromine falls and the bromine in gastric juice rises It is suggested that secretion of bromine into the gastric juice plays some part in determining the normal level of blood bromine

Dixon not only criticises the work of Zondek and Bier but also makes a total denial of the validity of their findings He states that the determination of the bromine distribution in the animal body leaves its role in the organism as mysterious as ever It seems probable that its presence is fortuitous and

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Abraham s work is outstanding From the analysis of a number of manic depressive patients Abraham formulated the view that a state of depression corresponded with a failure to obtain sexual gratification and that it symbolised a sort of renunciation of the sexual goal He describes the psychogenesis in terms similar to those Freud used in his description of the psychogenesis of paranoia Freud believed that paranoia was ultimately related to homosexual wish phantasies and drew up the formula I (a man) love him (a man) Such an idea is obviously unacceptable and in consequence the contradiction occurs "I do not love him I hate him This too is untenable and by the process of projection the sentence becomes He hates me which justifies me in hating him or in other words I do not love him I hate him because he persecutes me

In the affective psychoses a different conflict occurs A feeling of hatred predominates which is directed against the person s nearest relatives and later becomes generalised The formula is as follows I cannot love people I have to hate them This uncomfortable and distre sing thought produces feelings of inadequacy which are repressed and projected in terms of his supposed psychic and physical deficiencies and the formula takes the form People do not love me they hate me because of my inborn defects Therefore I am unhappy and depressed Under these circumstances the patient hates back and his sadistic impulses show themselves in dreams and in various symptomatic acts e g violent desires for revenge or in criminal impulses Usually such desires are not put into action but assume the form of delusions of guilt which may attain enormous proportions For instance one of my patients a youth of 18 years who has always been greatly dependen on his mother and has had a latent antagonism to his father develops an acute melancholic phase during which he accuses himself of all the crimes that ever existed He is a cheat a liar an inefficient inadequate person who has not only ruined himself but has impoverished his parents and will even injuriously influence the whole world With it all his attitude is passive indicating what has been termed a reinforcement of his masochistic tendencies so that he almost palpably obtains pleasure from dwelling on his miserable sins In such cases the ambivalent attitude is self apparent On the one hand such patients suffering from intense feelings of guilt hate and reproach themselves feel cowardly and revengeful look upon themselves as criminals of the worst type and may attempt violence on others or themselves It is by such inverted sadism that suicide is explained On the other hand such patients may become entirely passive may even obtain pleasure from their suffering so that the deepest melancholic distress has a pleasure component This self depreciation may be thought of as a trick or ruse to cover

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Psychopathology

The applications of the tenets of the psychoanalytic school to the understanding of the mechanism of the psychoses added zest and stimulus to psychiatric work It seemed that at last a method had been devised whereby a clearer view could be obtained of how and why the psychosis had occurred and naturally it was expected that treatment along psychological lines might become more specific and efficacious The affective disorders, as being the least serious departure from normal of all the psychoses, seemed particularly favourable to such an approach Our expectations still remain unfulfilled Most psychiatrists are willing to agree that in many cases, mechanistically, psychoanalytic theories offer an explanation of the symptoms and behaviour of the patient but the actual application of treatment has proved disappointing and in many cases, impossible It may be unfair to make a distinction between understanding of mechanism and application to treatment, it is not made with the idea of throwing cold water on psychoanalytic practice but only to indicate the limitations of the method The tracing out of the roots of disordered thought and conduct by psychological investigation is worthy of every encouragement in the hope that even although a method of satisfactory treatment has not as yet been discovered, in the future we may reach a surer and better foundation While we attempt to plumb the unconscious, it is well to remember that obvious and conscious factors often play an important role and should not be minimised A simple environmental adjustment may accomplish wonders even in a complexly determined situation, while the strong constitutional or hereditary basis of the affective disorders must always receive recognition Freud far more than his followers, has always recognised the limitations of psychoanalysis and strongly opposes its use in those conditions which are determined constitutionally and which are narcissistic or psychotic in type If one were to accept Freud's dictum, then nothing more need be said but there is such glorious uncertainty and so much individualism about psychiatric work that no one not even Freud, can speak with certainty as to what should or should not be done Some of his most ardent followers, e g , Abraham Schilder Melanie Klein have strayed from the straight and narrow path and have contributed articles dealing not only with the mechanism but also the treatment of

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Abraham s work is outstanding From the analysis of a number of manic depressive patients Abraham formulated the view that a state of depression corresponded with a failure to obtain sexual gratification and that it symbolised a ort of renunciation of the sexual goal He describes the psychogenesis in terms similar to those Freud used in his description of the psychogenesis of paranoia Freud believed that paranoia was ultimately related to homosexual wish phantasies and drew up the formula I (a man) love him (a man) Such an idea is obviously unacceptable and in consequence the contradiction occurs I do not love him I hate him This too is untenable and by the process of projection the sentence becomes He hates me which justifies me in hating him , or in other words I do not love him, I hate him because he persecutes me

In the affective psychoses a different conflict occurs A feeling of hatred predominates which is directed again t the person s nearest relatives and later becomes generalised The formula is as follows I cannot love people I have to hate them This uncomfortable and distressing thought produces feelings of inadequacy, which are repressed and projected in terms of his supposed psychic and physical deficiencies and the formula takes the form ' People do not love me they hate me because of my inborn defects Therefore I am unhappy and depressed Under these circumstances the patient hates back and his sadistic impulses show themselves in dreams and in various symptomatic acts e g violent desires for revenge or in criminal impulses Usually such desires are not put into action but assume the form of delusions of guilt which may attain enormous proportions For instance one of my patients a youth of 18 years who has always been greatly dependen on his mother and has had a latent antagonism to his father develops an acute melancholic phase during which he accuses himself of all the crimes that ever existed He is a cheat a liar an inefficient inadequate person who has not only ruined himself but has impoverished his parents and will even injuriously influence the whole world With it all his attitude is passive indicating what has been termed a reinforcement of his masochistic tendencies so that he almost palpably obtains pleasure from dwelling on his miserable sins In such cases the ambivalent attitude is self apparent On the one hand such patients suffering from intense feelings of guilt hate and reproach themselves feel cowardly and revengeful look upon themselves as criminals of the worst type and may attempt violence on others or themselves It is by such inverted sadism that suicide is explained On the other hand such patients may become entirely passive may even obtain pleasure from their suffering so that the deepest melancholic distress has a pleasure component This self-depreciation may be thought of as a trick or ruse to cover

a feeling of self satisfaction. One patient told me that it was almost 'luxury' to retail his gloomy feelings and to be alone. Such patients seek seclusion ar[e] infinitely happier when protected from family and friends, and often the depression reaches a stage of monoideism. Recently, one of my patients exhibited the above mechanism to a nicety. The highest degree of such inhibition and withdrawal is a depressive stupor, representing a symbolic dying. The clinical picture is not infrequently dominated by the expression of delusions of poverty, often accompanied by a refusal to take food and these feelings are strongly de*termined by libido development, so that it has been stated that poverty ideas* are caused by a repressed perception of his incapacity to love. Such ideas are especially common in the involutional melancholias and may be dependent on lack of sexual gratification.

It may be asked: All this may be very well for melancholia, but what about mania which is so apparently different in its external manifestations? Abraham believed that the difference was more apparent than real and that psychopathologically mania and melancholia had a common denominator. The apparent difference was only dependent on the patient's attitude. In his depressive phase he is so dominated by his difficulties that death seems to be his sole means of escape, in the manic state the whole complex situation is treated with indifference, all repressed instincts are swept away, the patient feels that he has experienced a re-birth, the sadistic-component instinct breaks its bonds, and aggressive conduct may become prominent. The manic attack seems to ward off and blot out the oppressing conflicts.

Abraham's later work was influenced by Freud's views on the theory of the pre-genital levels of development of the libido. These pre-genital levels consist of the oral sadistic or cannibalistic and anal sadistic stages. Abraham then advanced the idea that melancholia depression, was the result of regression of the patient's libido to the primary oral sadistic stage, e. g., refusal of food which represents a self punishment for his cannibalistic impulses, while he accepted, in addition, Freud's view that the patient having lost his love object regains it once more by the process of introjection, e. g., the self reproaches of the melancholic are directed towards his lost object.

In summing up his views regarding the pathogenesis of melancholia, *Abraham* treats the constitutional factor as of little or no account and states that what is constitutional and inherited is merely an overaccentuation of oral erotism. He believed that there was a special fixation of the libido on the oral level — abnormal pleasure from eating from the use of the jaws, a severe injury to infantile narcissism brought about by successive disappointments in love, the occurrence of the first important disappointment before the Œdipus wishes have been overcome, the repetition of the primary disappointment in later life is the occasion for the breaking out of the depression.

In melancholia the super-ego is a harsh task master but in mania it is kindly and tolerant A sense of power and superiority is the significant feature and according to Freud the patient seems to celebrate a triumph over the object he once loved and then gave up and introjected The patient s oral desires are so *increased* that *one* of Abraham s patients described this state as a gobbling mania and this is in line with many of those who express a strong craving for food as feeling ravenous etc and yet at the same time refuse it Freud s picturesque way of describing the position is by saying that in mania the ego is celebrating the festival of its liberation

Throughout the presentation of his work Abraham is modest excuses his work as incomplete and recognises the paucity of his case material He however held that by psychoanalysis a psychic rapport was established and that psycho-analysis was the only rational therapy to apply to the manic depressive psychosis

Schilder takes a more conservative view than Abraham and quite rightly criticises him for minimising the biological factor He says Even though the oral factor should be found to be the root of the manic-depressive disorder the hereditary transmissibility of the manic-depressive would not be exhausted by the assumed constitutional oral-erotism Schilder too recognises the difficulties in therapeutic application

For Melanie Klein the whole matter is as simple as falling off a wall She has no difficulty in formulating the basis of schizophrenia paranoid states *criminalism and manic-depressive states all in one and the same breath* She writes in terms of scotomisation the denial of psychic reality which she asserts forms the basis of the most severe psychoses In her view the depressive state is based on the paranoid state and is genetically derived from it For mania she believes that *the utilisation of the sense of omnipotence* is quite specific The case material on the basis of which she has developed her opinions is most unsatisfying she makes too easy what to everybody else is most difficult the understanding and elucidation of mental disorders

A case which serves to illustrate some of the points mentioned is that of a married man 41 years who has suffered from a profound melancholic state which has persisted steadily since 1929 His father an army man was a strict disciplinarian who was rather unapproachable his mother was a sociable woman with whom the patient got on well

The patient had a normal healthy boyhood but at the age of 20 years he showed evidence of cyclothymic personality being alternately depressed and elated His elated phases were characterised by great energy and excitement so that no life was said to be too hectic for him When depressed he became inactive and indifferent to all around him He married after a brief courtship His marriage was never a success and eventually his wife left him He was an

erratic, impulsive man who suffered from bursts of excitement, but just previous to his first period of mental hospital treatment he developed the delusion that he had venereal disease, that people were following him, and that he would be taken to prison Then followed a period of negativism when he refused to get out of bed, would not wash himself He was fault finding with his wife, accused her of extravagance, and latterly she felt she could do nothing right fo him He stated that his bowels and other bodily organs were diseased that he had syphilis, that his penis was green, and that his jaw was loose On account of his condition he was treated in a mental hospital, but no improvement was effected in his condition On numerous occasions bed treatment was necessary on account of his refusal of food

On the 16th of January, 1934, when admitted to the Royal Edinburgh Hospital for Mental Disorders, he was in an enfeebled state, and his expression was one of depression tinged with fear He looked like a startled child, stood or sat or lay in a huddled position He answered all questions quite correctly and coherently, but there was distinct retardation of thought and activity, so that there were times when he became negativistic and resistive He resisted so violently being fed that tube feeding was employed, he talked about poison and apparently thought that the food was being tampered with There was no evidence of hallucinations and no involvement of his intellectual functions

During his period of mental hospital residence he has made a marked improvement, both mentally and physically He has, however, persistently held to the belief that he is a source of contamination to others by excreting poisonous substances He talks as follows "I feel as if my whole being were going solid I am tired of being a devil with an evil spirit I used to think that the devil was imaginary, but now I believe in him — I realise that the devil is in me " Despite the above state he seems genuinely to want to get better, although in his present state, he is not able to see any prospect of it He blames himself for the death of numerous relatives and friends He maintains that he is the cause of all the trouble he sees around him and thinks that he requires punishment He still maintains the crouched attitude noted before, bites his nails and rather enjoys being cared for by the female nurses A recent examination showed that his mind was filled with retrospective falsifications and ideas of unreality Although he is living, in a sense he is not living ' It is terrible to have no courage and be unable to do the things one would like to do " He has been given too much to eat, and in consequence he is all choked up inside, his inside is congested, he never feels a call to micturate, but merely regulates his bladder by the clock There is a black, soapy secretion on his hands, his muscles are gone, his jaw is too mobile

He can give an excellent account of his life and shows no intellectual deterioration

The above case history is full of material which can be interpreted in terms of psychopathology very much on the lines laid down by Abraham His posture his inability to adapt to married life his symptoms characterised by negativism nail biting refusal of food a sense of guilt delusions of persecution feelings of unreality all indicate a reversal to the oral sadistic or cannibalistic state While we recognise that such may possibly be the psychopathological mechanisms it has been impossible so far to modify the course of his illness It would seem as though there had been present an attitude of hate which prevented the patient from expressing his ability or capacity to love His sadism is well shown by his attitude towards his wife blaming her and making her life so uncomfortable that she finally ran away from him His super-ego meantime makes the position very difficult It also seems in this case that we have an example of how such patients ascribe their conduct to their inadequacy and inefficiency rather than to their imperfectly repressed sadism The intense feelings of guilt which he experiences probably result from the expression of his revengeful traits, and it almost seems in some cases that the violence of the person s unconscious impulses of revenge can be correlated with the intensity of his delusional ideas It is the repression of sadism which leads to depression anxiety and self reproach

Although in the above case the oral-cannibalistic phase seems the more prominent, yet this patient by his orderliness — he is always extremely tidy in his appearance — by his parsimony — accusing his wife of extravagance etc — and by his obstinacy exhibits all the traits described by Freud as so characteristic of the anal-erotic

The case in fact exposes the fallacy of building theories and of attempting to fit cases into harmony therewith correlation is dangerous when exactness does not exist According to Freud libido may remain arrested at each level of sexual development — oral anal phallic It was suggested that fixation at the first oral phase might produce schizophrenia at the second oral phase melancholia at the first anal phase paranoia at the second anal phase obsessional neurosis, at the genital level hysterias occur It stands to reason that such categorism is dangerous unwise and untrue as the great majority of cases may show all phases not one of which may predominate greatly over the others Furthermore psychoanalytic theory is still in a considerable state of flux What is true to day may be contradicted to-morrow and that being so we should not be too glib at seeing mechanisms which may satisfy our vanity by giving us a feeling of understanding when perhaps we are miles from realising the truth It is not my place to discuss the various forms of psychoanalytic doctrine to assess or compare the work of Freud with that of Adler or Jung but I wish to draw attention to the most interesting work of Suttie which has just been published Suttie has reached the conclusion that repression is the product of love

rathe than fear, that love is social and not sexual The source of love is dependent on the mechanism of self preservation, on the need of food and not sexual desires and sensations, the original object of love is the mother and it is the innate need for companionship which is the infant's only way for self preservation The infant's mind from the beginning is dominated by the need to retain the mother, a need which, if not satisfied, may produce intense emotional distress such as rage and terror, as the loss of the mother may symbolise death itself Suttie in fact believes that the development of the child s social relationships is determined by the mother and not by the father as was stated by Freud From the state of feeling he is not loved, the child proceeds to a belief in his badness, which may form the starting point of a sense of inferiority leading to melancholia a state of self frustration or defect, or utter unworthiness Such a conception widens out the issues in a remarkable way and seems to offer an approach to treatment which may prove valuable A series of clinical studies along the lines suggested by Suttie would be most useful and would keep us more in touch with the actual circumstances than the utilisation of hypothetical fixation points and sexual symbolisations about which we can do nothing

Prognosis

The fact that affective disorders have been designated as benign is sufficient indication that such states are essentially recoverable We have, however, been in the habit of qualifying the prognosis of recovery by saying that affective disorders are usually recurrent in type, such a suggestion often leads to pessimism and fatalism and is not so true as has been supposed For instance Pollock has made a valuable contribution to this topic by analysing a group of 8 000 manic depressives in the New York State Hospitals He has shown that in more than half of the cases there has been no recurrence of an attack of sufficient severity to necessitate readmission to a mental hospital In addition, he has shown that frequency of recurrence is approximately the same in the two sexes and that patients between the ages of 20 and 40 years have fewer recurrences than those occurring at younger or older age periods For long I have been impressed by the fact that cases whose onset occurs in early adolescence show frequent recurrences ultimately requiring permanent mental hospital treatment The fact of their early occurrence, of their frequent recurrence and of the necessity of prolonged treatment is perhaps the best indication of the severe constitutional loading which is present Pollock s figures, however, are very important and should lead us to revise our notions regarding recurrence In certain cases they should allow us to take a more optimistic and reassuring attitude than we sometimes do So far we are quite unable to forecast at what intervals the attacks are likely to recur I know patients who anticipate a re-

turn of morbid symptoms year by year and usually at the same time in each year but as a rule we can agree with *Kraepelin when he* says that the length of intervals in almost o per cent of the cases amounts to ten years and over There seems little doubt that those cases which show a circular phase in each attack have a greater preponderance to recurrence than those others who present either a frank manic or depressive episode It is likewise true that those varieties showing mixed symptoms are the types which on an average are inclined to have the more prolonged attacks

While discussing duration it is usually afe enough to predict that the attack will last for a period of from three to six months Many attacks particularly manic ones will resolve much more quickly than three months and this refers not only to slight attacks but even to those most tempestuous acute delirious attacks called Bell s mania Mild depressions may also resolve much more quickly than three months but in estimating prognosis it is better judgment to err on the safe side If one predicts too quick a recovery and the patient fails to reach the anticipated stage both the patient and the relatives not only feel disappointed but may even think that the doctor does not know his business

There are still other cases which persist considerably *longer than six months but as a rule such cases are complicated by anomalous symptoms whose presence should safeguard even fixing a six months limit* It should be remembered that there are a few cases which *may persist for an indefinite number of years* Why some forms tend to recover so much more quickly than others is not easy to say The hereditary constitution the pre psychotic personality and the clinical symptoms have all a bearing and it has even been suggested but without much evidence to support it that psychopathological mechanisms may exert some influence

Those cases which come so to speak from a blue sky which have a history of hereditary predisposition or precipitating causes which are so trivial as to be of no particular moment have in my experience a far greater tendency to recurrence than cases in which manic or depressive episodes have been precipitated by more potent exogenous factors and where the hereditary tainting is slight or absent altogether While recurrences are more common in the former than *in the latter we have no facts to enable us to say that the attack will be of shorter duration in the one group as compared with the other*

As far as pre psychotic personality is concerned those patients who have exhibited swings of mood particularly at the adolescent period are of much graver prognostic risk than those others of more stable temperament whose initial attack has been in the third fourth or fifth decade

Regarding clinical symptoms it has become the custom to minimise their importance and in consequence case taking embodying a good clinical picture of the patient s actual state is not up to the standard of the past This is a

great pity because in psychiatry we are still far from having the exact knowledge to justify us in discarding any method of approach It is well known that hallucinations, ideas of reference, feelings of depersonalisation, delusions and disorders of conduct indicating regression to a primitive state of development may occur in manic depressive psychoses and need not necessarily interfere with the prognosis Provided that the patient has had a well exteriorised personality and good stuff in his constitution, he may be successful in coping with the most virulent attack, but it almost stands to reason that, when the clinical picture of mania or depression is blurred by anomalous symptoms of the type mentioned, we are dealing with a much more involved personality, who will take longer to readjust So long as we keep clearly in mind the setting in which such anomalous symptoms are occurring, so long as we are satisfied that the predominating state is either manic or depressive, and that the anomalous symptoms are secondary to the mood change, we need not waver in maintaining a favourable forecast

Strecker and his co workers have made an attempt to elaborate the matter further and in terms of identification and projection have advanced the view that those patients, who show marked emotional dependency on some members of the family or friend, and those, who project their symptoms on to others are less favourable prognostically There is really nothing new in this view, it has only been expressed in the language of psychopathology It simply means that less efficient, aggressive, stabilised individuals are perhaps prone to have a longer illness than others His attempts to elaborate the prognosis further on the basis of whether oral or anal pre genital tendencies were more usually present has no practical significance

As the age of the patient increases, and if he has been subjected to repeated severe attacks, we have reason and evidence to suppose that his bodily processes will suffer and that he may develop cerebral arteriosclerosis at an earlier age than would otherwise be the case If cerebral arteriosclerosis can be demonstrated then naturally the prognosis is adversely affected

In summing up, however it may be said that the manic depressive psychosis is essentially a recoverable disorder, that it tends to recur, but that recurrence is not so frequent as has been generally supposed, and that, irrespective of whether recovery takes place or not, there is only a slight weakening of the mental faculties which is in marked contrast to what occurs in all other psychoses

The prognosis associated with involutional melancholia brings up a number of other points which are worthy of consideration We can admit at once that the prognosis is not so favourable as in manic depressive cases occurring before the fortieth year By the time the patients have reached the involutional period they have become fixed and conservative, they are less elastic, they are less

able to adapt themselves to the changing circumstances of their life either of an individual or environmental nature Recovery is therefore not only less frequent but infinitely more prolonged Some writers give a recovery rate amounting to about 40 per cent but I would be inclined to put it considerably higher and say that approximately *50 to 60 per cent make satisfactory readjustments I use the term readjustment* rather than *recovery in that the recovery may not* be complete but is of such a nature that the patient can be looked after satisfactorily and without undue risk under home conditions Chronic manics have in my experience an infinitely worse prognosis than involutional melancholias

Regarding duration the course of a case of involutional melancholia is a prolonged one and not infrequently has to be computed in years rather than months A year to eighteen months should be sufficient time to allow the majority of those who are going to recover to form new adaptations but if the *affect continues to be well maintained then cases may persist for five years or* longer before recovery takes place Hoch and McCurdy in an analysis of 67 cases found that the average period before improvement set in was nine and one half months but it will be noted that they talk of improvement and not of when recovery was effected

While then the recovery rate is not so good nor the duration so short as in manic depressives yet it is probable that the tendency to recurrence is not so great These impressions indicate that in both chronic manics and involutional melancholics we are dealing *with rather more set and rigid and almost consistent pre psychotic personalities*

In relation to symptoms mention has already been made of the importance of retention of affect It has been said that when affect has been well maintained that almost irrespective of duration there is always the chance of the patient readjusting On the contrary when the affect becomes lost when the patient exhibits stereotypy in speech and conduct when there is negativism inaccessibility and the expression of bizarre hypochondriacal delusional ideas the prognosis becomes *infinitely more serious Furthermore as the patient advances in* years the case may become complicated by organic cerebral changes usually of an arteriosclerotic nature and these will have an additional injurious effect

Diagnosis

Under certain circumstances the diagnosis of either a manic depressive or involutional psychosis may be a comparatively simple matter The whole case *may so hang together that the pre psychotic traits can be accurately and se*curely correlated with the onset symptoms and course of the illness There are however lots of other cases in which the diagnosis or if one prefers it the type of mental reaction is extremely difficult to differentiate and where we have

to be content with saying that the condition is merely allied to the affective state, or is so uncertain as to be left undiagnosed We need not worry too greatly about our lack of diagnostic skill but rather should concentrate on the better elucidation of the undiagnosed cases There may be features about them which will help us to a clearer understanding of the various nosological groups

The chief objection to Kraepelin's grouping depends on the fact that he relied more on an analysis of symptoms than on other criteria We know now that symptoms can be extremely misleading and that to be used with any sense of security they require to be considered in the light of the individual's life history We have, therefore, come to lay as much, if not more, weight in diagnosis and also in prognosis, on certain pre psychotic traits than on the psychosis itself These pre psychotic traits are three in number, (1) hereditary predisposition, (2) personality, (3) physique

It has been noted that affective disorders show a hereditary predisposition in over 80 per cent of cases, and that in manic depressive cases the hereditary transmission is similar in type both in a vertical and horizontal direction That is to say, that manic depressive parents tend to have manic depressive children and that it is rare and unusual to have a mixture of manic-depressive and schizophrenic elements in the same sibling group Diagnostically, these facts may prove of great value in helping us to come to a correct estimation It may be, for instance that the presenting picture is atypical, but the knowledge that either parents or brothers and sisters have been affected by a manic-depressive state often helps to keep us on the right lines For involutional melancholia the above does not hold so true as parents, who may have exhibited that disorder may have manic depressive, schizophrenic or paranoid descendents One would, however, like to have the hereditary transmission of involutional melancholia more carefully worked out If the above finding is correct, it may serve as an additional reason why involutional melancholia should not be merged into the manic depressive group

From the point of view of personality we have a very useful guide in helping us to come to a correct interpretation of our cases The manic-depressive or cyclothymic personality contrasts sharply with the shut in schizophrenic There are, of course, many cases where the less well-exteriorised manic depressive may merge into the less shut in schizophrenic but carefully recorded personality studies preferably from a variety of sources usually are very safe guides safer almost than anything else The rigid, gloomy, serious minded, conservative involutional type is also distinctive

The third point, the physical habitus is not so well founded but there are cases in which the presence of a pyknic type can be used as additional evidence of a manic-depressive constitution

When we approach the development of the manic depressive psychosis the

usual history indicates that the onset has been acute and in some cases abrupt and dramatic That description perhaps applies more strictly to maniacal than to depressive phases but of particular significance as pointing to the manic depressive temperament is the occurrence of a short period of depression preceding the development of the manic phase In any case the onset usually extends over a matter of days or weeks or may develop even more acutely in response to a precipitating factor of a psychic or physical nature or to a combination of these two factors Such an onset is in direct contrast to the usually insidious development of a schizophrenic state The combination of an acute onset with a history of hereditary predisposition occurring in a person with well-exteriorised interests and possessing a pyknic habitus may often settle the diagnosis without any detailed consideration of the actual clinical symptoms

In involutional melancholia the onset as a further contrast to the manic depressive states is apt to be a much more protracted affair extending over a period of months or years before the help of the psychiatrist is enlisted

In considering symptoms we recognise that all the clinical symptoms of states of excitement and depression may be found as accompaniments of such diverse groups as schizophrenia and general paralysis paranoid states and cerebral arteriosclerosis mental deficiency and epilepsy while the relationship of manic depressive states to obsessional neurosis and the other neuroses still is not clear They merge into one another more often than is generally supposed When such combination of symptoms occurs a painstaking examination taking into account the complete life history of the individual is imperative before a correct diagnosis can be formulated

While we were still dominated by the criteria of Kraepelin we viewed the occurrence of hallucinations delusions and of conduct proceeding to a primitive archaic level e g wetting and soiling as of bad omen and as being more in harmony with a deteriorating psychosis than with one of a benign recoverable nature such as the affective states Now we recognise that the most extraordinary symptoms often of a bizarre nature can occur repeatedly and frequently throughout the course of a purely affective illness The importance we attach to such oddities of speech and conduct depends almost entirely on the setting in which they occur So long as the background is one of joyous exhilaration or its converse gloomy depression we need not hesitate to maintain our diagnosis of an essentially affective disorder When there is a considerable admixture of schizophrenic symptoms or symptoms which we have got into the habit of terming schizophrenic which is not infrequently the case we must form an estimate of what is preponderating and must ask as Bleuler does How much is manic depressive how much schizophrenic? Bleuler however is unnecessarily gloomy and cautious when he adds that there are no specific signs of the affect psychoses everything occurring in manic depressive states can be seen in other

diseases' Signs can become specific when considered in relation to constitutional traits, and usually there is not much difficulty in excluding the great proportion of complicating states In a few cases the diagnosis may require to be held in abeyance, but when the mood is happy, gay, infectious, when there is talkativeness and flight of ideas and psychomotor excitement, and on the other hand when there is sadness, slowness or agitation and difficulty in thinking without the presence of disturbing extraneous symptoms, we are perfectly justified in coming to the diagnosis of an affective disorder, if the pre psychotic history supports the clinical state, we may be increasingly sure that we have got very near the mark

From the point of view of differential diagnosis a number of further observations may help to clarify the matter further Cases of hypomania or of the more acute manias may require to be differentiated from cases of seeming moral obliquity While in states of excitement and elation, patients may commit petty or more serious misdemeanours, e g, thieving, breach of the peace, sexual offences, alcoholism, which can only be satisfactorily understood in the light of the mood change rather than as due to any flagrant deterioration of character requiring police protection For instance, a lady was arrested on a charge of having driven her car to the danger of the public, and for having assaulted a lady who expostulated with her A psychiatric examination disclosed the presence of hypomanic symptoms, e g, elation, over talkativeness lack of insight rather than evidence of a person who had been wilfully guilty of anti social behaviour

The boy, who accosted girls, told them fantastic stories of what he would do for them and was arrested by detectives, was also suffering from a hypomanic disposition which in a less enlightened age might have been treated with scant consideration

A dipsomaniac, who on numerous occasions has created a breach of the peace and on one occasion made a murderous assault on his mother, is a typical manic-depressive with periodic swings from mania to depression

Such cases are not easy by any means, but our law officers are becoming more cognisant of the influence of disordered mental states producing anti social or criminal conduct, and it is becoming much more usual to refer such cases for an expert psychiatric opinion This usually ensures the institution of appropriate care and treatment

The two great psychoses of adolescence are manic depressive and schizophrenic states We recognise that there are many manic-depressives who show schizophrenic symptoms, and schizophrenics who show affective symptoms so that it is a question of following Bleuler and of determining as accurately as possible which predominates Sometimes it is not possible to say, but on the other hand, there are differences which are well worth considering An analysis

of the pre psychotic traits e g hereditary constitution personality and physique combined with a description of the type of onset will help greatly and probably are the most important points but in addition there are symptomatological differences which are often striking For instance the excitement and elation of the manic is a much more joyous affair than that of the schizophrenic The excitement of schizophrenia comes in bursts or spasms is poorly sustained and is characterised by impulsive odd bizarre actions often resulting in injury to others or self mutilation whereas a manic excitement is harmonious infectious well sustained and characterised by a flight of ideas and pressure of activity In schizophrenia there is usually incoherence of thought stereotyped expressions and disordered conduct determined by hallucinations and delusions The manic-depressive state is largely in keeping with reality the schizophrenic leads a life of phantasy interested in the mythical and occult For a discussion of schizophrenia see Vol VII Chapt VIII

The following case may be utilised as illustrative of the difficulty which often exists A single man 30 years old an art teacher was admitted to the Royal Edinburgh Hospital for Mental Disorders in a melancholic state He stated that he had done himself harm that his brain was poisoned that ideas were sent to his brain by wireless and that he was constantly hearing voices using bad language He was so depressed that he had become tired of life On other occasions he *stated that outside influences such as the cinema had caused him to masturbate* and that he wished he could die He felt that the devil must be in possession of his mind On one occasion he had made a determined attempt to commit suicide by drowning and on another occasion cut his wrist with a razor blade

His family history showed that his paternal grandmother had been a patient in a mental hospital but had made a good recovery The patient had been a sensitive nervous clever boy who had suffered from enuresis At the age of 15 years he developed a nervous breakdown which lasted for upwards of one year He was easily tired had attacks of palpitation felt helpless but he made a good recovery completed his art course and became a teacher He found this too much of a strain was unable to keep discipline and suffered from a sense of inferiority and defeat

Throughout the period of his hospital life he has been intensely depressed and unhappy He is slow and retarded in speech and action is afraid and miserable His mind is tortured by terrifying thoughts and by the belief that people are putting electricity through him He too suffers from intense feelings of unreality e g Edinburgh is not what it used to be for me The world is dead and lifeless compared with what it was What a pity it is that life is not what it seems to be when we are young I cannot comprehend why people did not see what was going wrong with me as a boy The subconscious mind

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The two great psychoses of adolescence are manic-depressive and schizophrenic states We recognise that there are many manic-depressives who show schizophrenic symptoms and schizophrenics who show affective symptoms, so that it is a question of following Bleuler and of determining as accurately as possible which predominates Sometimes it is not possible to say, but on the other hand, there are differences which are well worth considering An analysis

Sometimes the manic state may be looked upon as evidence of a degree of mental deficiency, but such a conclusion is based on poor observation more than on anything else Both manic and depressive states but more especially the former may be superimposed on a mental deficiency and when this is so the attacks are much more episodic and short lived than those attacks occurring in better constituted individuals Taking a broad view of the whole matter it should be possible with ordinary care judgment and experience to differentiate correctly manic reactions from possible complications

When we consider the depressive reactions much greater difficulty is in store for us The depressive reactions are so much more multiform and have closer affinities both with the neuroses and the psychoses It has been stated how de pressive states may be cloaked by an over-emphasis of physical symptoms which may lead one to think in terms of neurasthenic obsessional hypochondriacal or anxiety states Close and constant observation however enables one to realise that sadness often accompanied by irresolution and difficulty in thinking is in the ascendant Furthermore the investigation of the history usually leads one to the point where no specific ætiology is forthcoming and where the condition is probably more dependent on the constitutional or endogenous factors than on anything else in the other states which have been mentioned psychogenic causes usually can be discovered there is volubility rather than retardation a state of apprehensiveness and alarm rather than sadness and resignation

The attitude and posture of the patient suffering from epidemic encephalitis may occasionally be mistaken for a depressive state For instance within the past month two cases of epidemic encephalitis were referred to me by experi enced physicians as cases of depression In each case the parents had been encouraged to stimulate the patients by long walks by work and by social amusements and gaieties The absence of hereditary involvement and of a cyclothymic disposition and the history of a long insidious onset resulting in a change of di position and character were diagnostic enough but the difference in mood and attitude was also impressive For instance both of the patients though dull in appearance with blank expressionless facies and general rigidity respond d quickly when questioned and did not express any subjective feeling of sadness but more concern for their enfeebled physical state

The impossibility of differentiating accurately between depressions constitu tional or endogenous in nature and psychogenic or reactive depressions has already been discussed and need hardly be elaborated further We require much more detailed work and a much larger amount of clinical material before we can say which cases are likely to be recurrent or not That would seem to be the only reason for attempting to create a differentiation which otherwise serves no purpose

So far we have dealt with the purer and more classical types but a word re

as creating another self and rooting me to the earth so that when the spirit escaped I did not escape with it. Where are all the people I used to know?

Apart from the above state we have a perfectly well-coordinated personality, a man who has retained his sense of self respect, who is coherent in his thought and conversation and natural and polite in his bearing. There has been no disintegration or split in his personality, and there has been no progressive deterioration, but rather a tendency to come up to a better level.

In such a case one could argue as one liked. Some would emphasise the seclusive disposition, the hallucinosis, the bodily influences, while others would argue as to the affective change being the primary consideration. It is not my purpose or wish to discuss the academic merits of this case, but simply to point to it as one in which schizoid and cycloid manifestations exist side by side. The depersonalisation and derealisation features are noteworthy features.

The stupor reaction is particularly difficult to differentiate. Symptomatically, there is no way by which a depressive stupor can be differentiated from a catatonic stupor. Hoch drew up a more or less arbitrary series of criteria by which it might be possible to effect a distinction, but in actual practice such criteria do not hold good. The depressive stupor sinks into just as deep and profound an inhibition as the catatonic. In such cases the differentiation has to be effected on the basis of the pre-psychotic traits previously mentioned.

Hypomanic and manic states occasionally may be confused with recurrent paranoid states, states in which a specific situation appears to precipitate a transitory psychotic state mainly characterised by irritability, suspicion, ideas of reference and delusions of persecution. Kraepelin was so impressed by the similarity of such states to manic-depressive states, that he was inclined to group them with the affective states. There are, however, differences sufficiently marked to allow of separate categories. Again, the pre-psychotic traits of the paranoid are widely separated from the manic-depressive constitution; in both groups the onset may be relatively acute; the paranoid state of excitement often contains a bitterness and litigiousness, which is foreign to the manic disposition, and the paranoid state does not show the emotional fluctuations from grave to gay which characterise the affective disorder, but rather a sustained, suspicious *embittered mood which in each attack is the replica of the previous one*. Cases, however, have been presented showing how in certain cases differentiation may be almost impossible.

Superficially the elated exalted mood of the general paralytic may be confused with a simple maniacal attack, but so long as it is remembered that in every mental case a complete detailed, physical examination is as important as the mental examination, then one should gather sufficient information to suggest blood and cerebrospinal examinations, which would inevitably, or almost so, lead to a correct diagnosis.

Sometimes the manic state may be looked upon as evidence of a degree of mental deficiency, but such a conclusion is based on poor observation more than on anything else. Both manic and depressive states but more especially the former may be superimposed on a mental deficiency and when this is so the attacks are much more episodic and short lived than those attacks occurring in better constituted individuals. Taking a broad view of the whole matter it should be possible with ordinary care judgment and experience to differentiate correctly manic reactions from possible complications.

When we consider the depressive reactions much greater difficulty is in store for us. The depressive reactions are so much more multiform and have closer affinities both with the neuroses and the psychoses. It has been stated how depressive states may be cloaked by an over-emphasis of physical symptoms which may lead one to think in terms of neurasthenic obsessional hypochondriacal or anxiety states. Close and constant observation however enables one to realise that sadness often accompanied by irresolution and difficulty in thinking is in the ascendant. Furthermore the investigation of the history usually leads one to the point where no specific ætiology is forthcoming and where the condition is probably more dependent on the constitutional or endogenous factors than on anything else; in the other states which have been mentioned psychogenic causes usually can be discovered; there is volubility rather than retardation a state of apprehensiveness and alarm rather than sadness and resignation.

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quires to be said regarding mixed types They are notoriously difficult to recognise except as they occur in transition periods between manic and depressive phases The picture presented often seems so anomalous that the superficial observer is apt to think of schizophrenia or of a state of mental defect rather than of a more recoverable affective disorder An analysis of the symptoms should however, be the means of leading to a correct understanding, especially when correlated with the pre psychotic traits

The inter relationship of manic depressive and involutional states has been commented on, and there is no doubt that they have points in common but we are still inclined to term those states involutional melancholia, when they develop their first attack after the age of 45 years and are characterized by the group of symptoms enumerated, a depression with anxiety, plus feelings of unreality and the expression of hypochondriacal and nihilistic delusions There seems no good reason to ally the recoverable involutional melancholics with the manic depressives and the unrecoverable or chronic with the schizophrenic Rather let us admit that, just as in other diseases, there are some cases which get better and others which do not In a broad way the involutional melancholics show less hereditary involvement, a more uniform and stable pre psychotic personality, a more anomalous physique, a longer developmental period and a more specialised symptomatology In fact, in both chronic manics and involutional melancholics we have sufficient reasons to keep them a shade apart from the more classical manic depressive types

The differentiation between involutional melancholia and paraphrenia is sometimes extremely difficult We say, of course, that in paraphrenia the mood change is secondary to the delusional formation and that in involutional melancholia the mood change is primary, and the delusional formation dependent thereon, but in many cases it is not at all easy to be sure as to which has come first As a rule it can be said that the paraphrenic mood is one of suspicion rather than of depression, and in addition there is an element of self sufficiency and justification, the involutional melancholia on the other hand feels blameworthy and instead of attempting to white wash himself rather accuses himself the more The depressive attitude is subjective, whereas the paraphrenic projects his troubles, difficulties and suspicions on to others Furthermore, the involutional melancholic does not show the slow insidious disorganisation of personality and intellectual impairment and lack of insight of the paraphrenic

Occasionally the involutional melancholic state is complicated by a cerebral arteriosclerosis but in addition a cerebral arteriosclerotic dementia may be mistaken for involutional melancholia In both conditions we may see distress anxiety, emotional lability restlessness and the expressions of hypochondriacal delusional ideas Emotional lability is the rule in arteriosclerosic states, whereas in involutional melancholia, although emotional lability occurs, yet generally

speaking the state of emotional distress is much more uniformly sustained The presence of physical symptoms such as headache vertigo albumen in the urine focal symptoms accompanied by a progressive intellectual degeneration should make the diagnosis of cerebral arteriosclerosis clear

While the above differentiations have been put forward as guides to help in accurate diagnosis they are far from being infallible and should be looked upon as suggestions rather than as hard and fast rules to be held to in every case The conception of thinking in terms of reaction types rather than of strict nosological entities allows our groupings to be much more flexible and this in the present uncertain state of psychiatric knowledge is of great advantage

Treatment

The recognition that the affective disorders are dependent mainly on constitutional or endogenous factors is apt to create a fatalistic attitude and a spirit of therapeutic nihilism The individual cannot be entirely re-constituted we have to take him as we find him and do what is possible to guide and modify his disposition and conduct by dealing with the factors personal or environmental which can be influenced We admit that no specific method has as yet been discovered whereby affective disorders can be prevented from occurring nor can we be sure by the means available at present of shortening the duration of the attack It runs its course just like pneumonia or scarlet fever but in some cases we can give considerable help While it is true that in the great majority of cases recovery takes place spontaneously yet there are various expedients which can be utilised to guide the patient easily through his illness and strengthen his resistance by giving him such an understanding of himself and such an organisation of his life as to minimise the chance of recurrence It is a grave mistake in any way to let the patient feel that the whole matter depends upon himself he should be encouraged to believe that the doctor can help and that it is necessary for him to keep in close touch with the doctor A good many doctors are sensitive about their position to such patients they think that their visits are unavailing whereas the interest which the doctor shows and the assurance which he is able to give help the patient more than anything else The doctor however should not adopt merely an expectant attitude but should in all sorts of ways help in the ordering of his patient s life For long we have been in the habit of saying that the treatment of mental illness is a much more individual affair than the treatment and management of physical illness that we cannot afford to be stereotyped but must be willing to modify or even change our view not once but many times If we accept that position then it behooves us to practise what we preach to live up to our convictions and to apply ourselves strenuously to

the individual treatment of each patient taking into consideration not only his present illness but the examination of the whole of his life history. One expedient after another may require to be employed, and in the end it is salutary to remember that the good result attained may not have been due to any specific remedy which was applied, but to the personal interest, kindness and enthusiasm which were shown.

Our more sympathetic understanding of mental illness has effected improvements in treatment which has been reflected in the orderliness and quietness of our mental hospitals to-day compared with the conditions which existed even in so short a space of time as twenty-five years ago. The construction of admission units, allowing of the better sub-division and classification of smaller groups of patients, has led to better and quicker results than were previously recorded. Formerly maniacal and acutely depressed patients, especially when suicidal, were prejudicially differentiated and were unduly restricted and controlled by mechanical devices such as padded or single rooms, restraining apparatus, or by a generous supply of hypnotics. By such methods the illness often was unduly prolonged; patients were, in some cases, manufactured, and a bitterness was left which might affect the patient throughout the remainder of his life. Conditions have changed very much, and mental hospitals to-day compare favourably with the standards aimed at in the best general hospitals. Both the nursing and medical standards have improved enormously, and the confidence of the public is evidenced by the large numbers of patients who now seek admission to the mental hospital on a voluntary basis.

The question as to when it is advisable to recommend mental hospital treatment is not easy to answer. Sometimes it is impossible to convince the patient, his relatives, or his family doctor that strict care and supervision under mental hospital conditions are necessary. The family doctor often is principally to blame. He is averse to take a stand because he feels that if he suggests any such course he may antagonise the patient and the patient's family, and in too many cases he has little or no faith in the management of the mental hospital. If the doctor was more enlightened and broader minded, the mental hospital would, in many instances, be utilised more quickly with consequent better results to the mental patient. While criticising the family doctor it is recognised that his difficulties often are great and that the situation may be delicate to handle. For instance the hypomanic patient has so little insight that to call his sanity into question is considered as a deadly insult; it is not until his conduct becomes anti-social that any form of mental hospital treatment or control can be utilised. In cases of depression the position is different in that the patient has a good appreciation of his state and often is extremely anxious to seek protection and 'asylum.' This does not necessarily mean treatment in a mental hospital, because many depressed patients can be treated in their own homes in ordinary

nursing homes in psychiatric clinics or even as out patients either at a hospital or privately In order to carry out effective treatment no matter by what method it is essential to have a detailed chronological account not only of the patient s illness but of his life and conduct The mere telling of his story to a sympathetic and understanding listener will by itself often accomplish wonders It is only then that the doctor will be in a position to give helpful reassuring advice and whatever explanations of the mechanism of adaptation and unconscious motivation which may prove useful In such a way many patients can be guided gently over difficult places and can be protected from something more serious The general practitioners of the future with their greater knowledge and appreciation of the importance of psychological causes and of the early symptoms and signs of mental illness should be able to exert a beneficent influence on the incidence and treatment of the affective disorders but they should never hesitate to avail themselves of the services of the mental hospital

In every case demanding mental hospital treatment the financial social and business interests of the patient should all be carefully enquired into When this has been done and when strict supervision and control have been decided upon the next question which arises is in regard to the best person or persons to exercise this control Devoted relatives can often nurse a patient successfully through any form of physical illness but mental illness causes such great anxiety not only to the patient but to the patient s relatives that the one is liable to react on the other and friction creeps in As a rule then the mentally ill patient is more easily nursed by strangers by nurses and doctors and interference from the family should be reduced to a minimum

On the other hand it is very essential that the doctor should have the entire co-operation of the relatives and short visits from members of the family should be encouraged rather than discountenanced In far too many cases the visits of relatives are prohibited altogether I have seen far more harm than good done by adopting such a procedure So long as the illness is carefully and fully explained to the family co-operation readily follows and little difficulty is experienced in getting them to abide by any rules and regulations which may be considered most advantageous to the patient My practice is to encourage rather than to discourage the visits of relatives especially in depressive cases where the patient feels that he has disgraced himself and his family The fact that his family are keeping touch with him is reassuring and of distinct therapeutic value

Manic patients too respond to the visits of relatives to a surprising extent Perhaps the chief point to keep in mind is to warn the relatives not to attempt to stimulate the patient too much Not unnaturally lay people have the idea that all that is needed in the care of the depressed patient is to cheer him up to take him to entertainments to concerts to socialise him and these of course

are just the things which the depressed patient cannot do, such attempts serve to increase rather than to alleviate his distress Depressed patients are tense afraid, lacking in confidence and unable to meet social obligations In consequence, their life should be reduced to one of great simplicity, putting no more strain on them physically or mentally than can be safely borne Relaxation is essential, social interests and activities should be reduced to the minimum, the resistance of the patient should be built up, gradually, until he feels himself that he can begin to try again Anything that he is asked to do should if possible, be done successfully Eventually a time comes when more positive encouragement is required, when the patient may have to be forced, but the time for this must be chosen with great care, otherwise a tragedy may be promoted rather than recovery As an example of injudicious management I would instance the case of a married man, 44 years old, who had always been subject to swings in his mood, but who for three years previous to my seeing him had been in a consistently depressed state, characterised by sadness, seclusiveness, lack of interest and feeling of inefficiency and suicidal thoughts He had consulted numerous doctors who had told him that there was nothing wrong, that he must exert himself, that he must go to entertainments, that his wife should force him, get him to use his will power and be firm with him The injudiciousness of such advice should only need to be mentioned to be condemned, but unfortunately it is still far too frequent to-day A full discussion of his case a re arrangement of his life, an explanation of how his nervous system must be delicately handled resulted in an almost instantaneous clearing up of his symptoms

When the patient has been admitted to a psychiatric clinic or mental hospital it is preferable to institute a period of bed treatment no matter whether the patient is excited or depressed The vast majority of patients are debilitated physically and often have lost a good deal of weight The wear and tear on their nervous systems have been tremendous, and their physical strength must be conserved and improved by careful nursing, dieting, the promotion of sleep and attention to the bodily functions It stands to reason that any source of focal infection, any disease of the organs or internal glands requires the same care and *attention as if the patient were in a general hospital*

The verandah or open air treatment is excellent, and for a variety of reasons is preferable to continuous bath treatment or other hydrotherapeutic or pyrotherapeutic methods The special advantage of the verandah method of treatment is that it does not involve any disturbance to the patient, the patient is placed in pleasant natural surroundings he is in the same place and same bed day and night, he has a continuous supply of fresh air which acts not only as a restorative but as a sedative as well If it is desirable to have the patient by himself he may be placed in a hut which can be opened on all sides Th

arrangement is useful for troublesome noisy patients who may be a source of disturbance to others or who are apt to be irritated by others This method not only promotes sleep and quietness but stimulates the appetite and acts as a tonic to the body generally

Continuous bath treatment consisting of immersing the patient in warm water for hours on end has had a great vogue both in the United States and on the Continent and splendid results have been claimed in calming excitements As compared with open air treatment continuous bath treatment is a little unusual and strange it terrifies some patients and in other cases is devitalising It may sound like heresy to say it, but personally I have found the continuous bath method disappointing, it proves most efficacious in mildly toxic and delirious states Packs, whether warm cold or dry I have come to discard altogether I know that they are strongly advocated for psychoneurotics, who are co-operative and understanding but in manic-depressive cases the patient almost invariably thinks of them as a form of restraint and fights against being put in a pack The trouble in arranging for packs is not justified by the results attained

Sleeplessness is one of the most troublesome symptoms with which we have to deal The manic is so excited elated and restless that he has no time to sleep, the depressive patient is so filled with gloomy thoughts and anxious forebodings often regarding death that he is frightened to sleep and may refuse hypnotic drugs or fight against their effects The methods mentioned above, e g open air treatment and continuous baths may help considerably but they may require to be supplemented A comfortable bed in good surroundings is a great help and simple arrangements such as an adequate food supply and a warm drink at bed time may accomplish wonders A sense of reassurance and protection especially in anxious depressed patients is of great importance To effect this an adequate nursing personnel especially at night time is essential All troublesome difficult and sleepless patients can then be nursed in the open wards in the case of private patients who can afford special nurses single rooms may be utilised The system of using padded rooms and single rooms must have resulted from the fact that the night nursing staff was quite inadequate to cope with the number of patients and in consequence the troublesome ones were relegated to locked rooms I have not used padded rooms or locked single rooms in the treatment of patients for the past eighteen years On the contrary all the most difficult patients are under the care of nurses in the open wards and little or no difficulty is experienced in their management They respond to the knowledge that they are being cared for and protected Padded rooms and locked rooms are an added indignity to a person who has already lost all confidence and self respect, they retard rather than promote recovery and so should not be used.

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introduced somnifaine an aqueous solution of diethylamine salts of diethyl and allyl iso-propyl barbituric acids and other observers notably Oberholzer Muller Strom Olsen and McCowan write more or less enthusiastically regarding the results achieved Klasi was not sure as to how much credit to give to somnifaine He believed that the somnifaine treatment to be effective must be supported by psychotherapy his view being that somnifaine treatment allowed freer co-operation Strom-Olsen and McCowan reported on a mixed series of 107 cases Their technique consisted in putting the patient to bed in a quiet darkened room and then administering somnifaine intramuscularly in 2 c c doses as occasion demanded A dose of 6 c c in 24 hours usually is sufficient to produce continuous sleep With each dose of somnifaine 10 to 15 units of insulin are injected hypodermically and glucose 30 gm (an ounce or more) is given by mouth The diet should be fluid and should consist of milk cocoa or lemon water to which glucose may be added The duration of the treatment is usually 14 days but even shorter periods may prove effective The cases treated by Strom Olsen were schizophrenia (all types) 49 cases manic depressive (including involutional cases) 45 cases psychoneuroses 13 cases *Among the schizophrenics 4 recovered 19 were improved 6 showed no change Of the manic-depressives 1, recovered 13 were improved 15 showed no change* Infinitely the best results were obtained in mania 11 of the 17 recovered If the above figures can be repeated by other observers somnifaine therapy may prove a valuable means of shortening the attacks Of the psychoneurotics 8 recovered (anxiety states principally) improved 3 showed no change

The above results are impressive and indicate the importance of further experimentation My own results have not been nearly so gratifying as those reported The method is not easy the most careful and vigilant nursing is required awkward symptoms sometimes occur and although patients may show temporary improvement during the treatment and for a few days afterwards they rapidly relapse into their former habits At the moment I am inclined to take a very guarded attitude until much further work has been accomplished

In cases of stupor attempts have been made to produce a state of cerebral stimulation Lorenz and Loevenhart and Solomon Kaufman and D Elseux have used the inhalation of a mixture of 40 per cent carbon dioxide and 60 per cent oxygen and by this method patients could be roused from periods of from 10 to 15 minutes during which they would talk and take more interest in their surroundings Inhalation of CO_2 acts as a stimulant to the respiratory centre causing general dilatation of the cerebral blood vessels and so a general cerebral stimulation

Sodium amytal (sodium iso-amylethyl barbiturate) is capable of producing a similar response to that obtained with carbon dioxide and oxygen This drug is given intravenously in doses of from 0 6 to 1 gm (10 to 15 grs) Following

Hypnotics

When hypnotics are necessary, they should be used with great discrimination and for the shortest time possible The sooner natural sleep can be induced, the better On many occasions, hypnotic drugs are used so indiscriminately that the original illness becomes complicated by a delirium produced by injudicious drug therapy necessitating mental hospital treatment Bromide is one of the chief offenders It is looked upon as a harmless drug but it slowly and gradually accumulates in the system, and symptoms, which may be considered as evidence of deterioration of the personality, can often be ascribed directly to this cause The barbiturates, hyoscine and morphine are not entirely free from blame A cure is often quickly effected, once the drugs have been satisfactorily eliminated In fact when a person is obviously not responding to hypnotic drug treatment large quantities being used without producing the desired effect it is wiser to stop their use entirely and try to gain control by some other means altogether If, however, the above warning is kept in mind, then the various salts of bromide may have high therapeutic value A mixture of potassium bromide in doses of 0 6 to 1 3 gm (10 to 20 grs) with chloral hydrate in doses of 0 3 to 0 6 gm (5 to 10 grs), given thrice daily or in certain cases every four hours, may produce excellent results Care should be taken that the excretory functions are well attended to so that the cumulative effects of drug intoxication are avoided Paraldehyde in doses of from 4 to 16 c c (1 to 4 drachms) is a splendid hypnotic which acts quickly and safely and does not create after effects such as headache, dizziness, or mental confusion The average dosage is 8 c c (2 drachms) in a dilution of 4 c c to 30 c c (one drachm to one ounce) of water There are now so many excellent hypnotics on the market that it becomes almost impossible to differentiate between them as to their relative efficacy Barbital (veronal) in doses of 0 6 gm (10 grs), medinal 0 5 gm (7½ grs), trional 0 6 gm (10 grs), luminal 0 1 gm (1½ grs) are examples of those which in my experience have proved most valuable and effective Luminal acts especially well in epileptoid states, but patients frequently complain of after-effects e g, headache dizziness, ataxia In each case a variety of hypnotics may require to be tried before the most suitable one is found Sulphonal which was so much lauded at one time I have come to discard altogether For emergency purposes or in states of great excitement which are difficult to control recourse may be had to nembutal (pentobarbital sodium) or to a combination of hyoscine and morphia The latter combination hyoscine 0 6 mgm (gr 1/100) with morphia 10 to 15 mgm (gr 1/6 to 1/4) seldom fails to cope with the most severe case, and it has the advantage of being given hypodermically

In recent years attempts have been made to produce prolonged sleep Klasi

tives and if they refuse the safeguards which the doctor has advised then the relatives and not the doctor, are morally responsible for the consequences It is true that in the case of inhibited patients those lacking initiative the dangers are not so great, but the greatest care should be taken before there is any relaxation of supervision It is essential that supervision be exercised in as tactful and unobtrusive way as possible I am strongly opposed to the custom of having suicidal wards or suicidal lists Patients who are depressed are extremely sensitive they soon get to know that they are under special conditions or that they have been black listed and this may act as a considerable aggravation at the time and leave a feeling of unfairness which cannot be lived down afterwards The possibility of suicide should be discussed freely and openly The explanation may be given that suicidal thoughts and impulses are among the commonest of depressive symptoms but that they are merely incidents in the course of an illness This is important because otherwise, the patients are inclined to look upon themselves as criminals rather than as sick people, as men and women in trouble

Occupational Therapy

The value of occupational measures as an aid to readjustment is important This applies equally to the manic and the depressive The manic's energies and interests in this way can be directed into more constructive channels he forms fresh contacts and often feels much less irritated in the occupational department than when closely associated with doctors and nurses To the depressed patient the development of occupational therapeutic work has been a God send His interest may be aroused to a level which he thought was impossible and the fact that he sees something growing under his hand and by his own endeavour creates a sense of success which may lead to a re-establishment of his self respect His sense of failure and defeat becomes replaced by a feeling of success and victory So many patients who are depressed suffer from a lack of concentration that intellectual pursuits such as reading and writing become an additional source of worry and anxiety whereas the practical application of work either indoors or outdoors can be easily accomplished In addition to being both ameliorative and curative occupational therapy may be utilised as an instrument of prevention Intelligent parents school authorities and employers of labour are recognising more clearly than ever they did previously that people should be started in careers suited to their capabilities and that chances of advancement and promotion should be provided A career should not be chosen in a hap-hazard fashion it should not be undertaken to satisfy the pride of the parents but rather because the individual has some real aptitude and a desire to be successful in whatever he undertakes This will lead to

the narcosis, periods of "lucidity" have been reported persisting from 2-14 hours

The work reported above is extremely interesting and important and seems to indicate that a physiological approach may be possible

Diet

Sufficient nourishment is as important as sufficient sleep, otherwise the patient's physical health may become seriously affected, and recovery will be rendered more difficult Manic patients are not, in this respect, so great a worry as the depressed Manic patients not infrequently eat ravenously and need everything they can get, but sometimes they are so busy, excited and elated that they cannot spare the time to eat Usually, however, they can be induced to take sufficient nourishment Patients who are depressed have poor appetites or may refuse food altogether, so that a rapid reduction in weight occurs They may state that they are not entitled to food, that they cannot afford it, or that they have such a feeling of fulness that they cannot take an other morsel If this is so, then tube feeding should be started at once Spoon feeding or feeding by means of a feeding-cup is entirely unsuccessful and unsatisfactory, as usually it means that both the patient's and the nurse's temper become unduly frayed Tube feeding is performed by either the nasal or stomach tube I much prefer the latter, it is easier, quicker and safer and ensures a better and more varied nourishment By either method it is possible to maintain and improve the patient's health and strength until improvement and recovery set in Sometimes, after the first or second tube feeds, the patient will begin to eat himself It is much better to institute tube feeding early rather than to wait until the patient has become emaciated

Excretory Functions

The excretory functions also require careful attention In depressed patients, high colonic lavage at regular intervals often is extremely valuable especially in depressive stupors The bladder requires watching in case of retention of the urine

Suicide Prevention

The question of suicide has already been discussed at considerable length and need not be further elaborated We must ensure that every depressed patient, no matter how mild the depression may be, is under careful supervision The risk of suicide occurring should always be pointed out clearly to the rela

tives and if they refuse the safe guards which the doctor has advised then the relatives and not the doctor are morally responsible for the consequences It is true that in the case of inhibited patients those lacking initiative the dangers are not so great but the greatest care should be taken before there is any relaxation of supervision It is essential that supervision be exercised in as tactful and unobtrusive way as possible I am strongly opposed to the custom of having suicidal wards or suicidal lists Patients who are depressed are extremely sensitive they soon get to know that they are under special conditions, or that they have been black listed and this may act as a considerable aggravation at the time and leave a feeling of unfairness which cannot be lived down afterwards The possibility of suicide should be discussed freely and openly The explanation may be given that suicidal thoughts and impulses are among the commonest of depressive symptoms but that they are merely incidents in the course of an illness This is important because otherwise the patients are inclined to look upon themselves as criminals rather than as sick people as men and women in trouble

Occupational Therapy

The value of occupational measures as an aid to readjustment is important This applies equally to the manic and the depressive The manic s energies and interests in this way can be directed into more constructive channels he forms fresh contacts and often feels much less irritated in the occupational department than when closely associated with doctors and nurses To the depressed patient the development of occupational therapeutic work has been a God send His interest may be aroused to a level which he thought was impossible and the fact that he sees something growing under his hand and by his own endeavour creates a sense of success which may lead to a re-establishment of his self respect His sense of failure and defeat becomes replaced by a feeling of success and victory So many patients who are depressed suffer from a lack of concentration that intellectual pursuits such as reading and writing become an additional source of worry and anxiety whereas the practical application of work either indoors or outdoors can be easily accomplished In addition to being both ameliorative and curative occupational therapy may be utilised as an instrument of prevention Intelligent parents school authorities and employers of labour are recognising more clearly than ever they did previously that people should be started in careers suited to their capabilities and that chances of advancement and promotion should be provided A career should not be chosen in a hap-hazard fashion it should not be undertaken to satisfy the pride of the parents but rather because the individual has some real aptitude and a desire to be successful in whatever he undertakes This will lead to

contentment and happiness, it will increase the individual's self respect and create a stability of emotion and conduct which may well prevent the development of affective disorders, or even other disorders of a neurotic or psychotic nature The scope of occupational therapy, therefore, is not only an institutional affair, useful for the rehabilitation of those who are ill, but its real sphere is in enabling people to lead better balanced, more harmonious lives, thus obviating the development of nervous or mental illness

The above measures supplemented by a thorough review of the patient's life history along with sympathetic understanding and encouragement, are sufficient by themselves to enable many patients to make a good readjustment An excellent plan is to advise the patient to keep in touch with the doctor and to report to the doctor at once should there be the least suggestion of recurrence On the whole, however, I prefer, as far as possible, to say as little as possible about the chances of recurrence, if the individual's life is harmoniously arranged, a recurrence never need occur

Psychoanalysis

Very few cases of affective disorder occur in which psychoanalytic treatment is either advisable or desirable I am certain that any such cases must be chosen with the greatest discrimination and can only, with safety be treated by the most experienced otherwise dire disaster and tragedy will result rather than recovery I have seen suicidal attempts precipitated more than once by such treatment but even more importantly, states of invalidism which need not necessarily have occurred

So long ago as 1909 Ernest Jones reported a case of hypomania in reference to which he stated that Freudian methods were likely to have a far reaching effect in the treatment of cases of mental disorder Penetration of the mind it was thought would lead not only to a greater understanding of pathogenesis but also to more specific treatment Campbell in commenting on the above case believed that Jones had succeeded in showing that the peculiar actions and utterances were the expression of deep set disturbing factors in the patient's life He held that it was essential not only to pay attention to the form of the disorder but to the content of the psychosis ' and to the stuff of the individual's life from which that content is derived' Formal presentations should be supplemented by subjective analysis Campbell's general opinion was that Freudian formulations were valid in general psychiatry In a further paper Campbell elaborated his position more fully and from an analysis of a series of case records stated that 'analysis leads down to factors of more than historical significance, dynamic factors at the root of the individual's activity" From this basis he argued that in these cases a careful reconstruction was required of

all the facts and factors entering into the attack and that by so doing the patient might in future be more able to withstand further attacks

I think that most psychiatrists are quite willing to agree that the greater insight and knowledge we acquire in relation to every case the more chances will exist of being able to provide help and guidance to the patient but the optimism of 1909 in regard to psychoanalytic treatment has fallen far short of anticipation Since then we have had the contributions of Abraham and others dealing mainly with the analysis of depressive states Abraham has told us that psychoanalysis is the only real specific treatment for manic depressive states and that it is only by its use that satisfactory rapport can be established With such an opinion I totally disagree At the present time I would have the audacity to range myself with Freud when he states that psychoanalytic treatment of the psychoses is contraindicated While this is the case we must be able to keep open minds to study our cases in as great detail as possible and to come to as accurate an estimate as we can of the underlying mechanism be it sexual or social

The students of today who will be the general practitioners of tomorrow have been unduly bitten by the psychoanalytic organism they are inclined to believe that psychiatry is absolutely dependent on psychoanalytic theory and practice and they do not hesitate to walk in where others with greater experience fear to tread In consequence careful history taking and good descriptive accounts are being relegated to the background This is a dangerous policy In the care and successful treatment of those suffering from affective disorders we cannot afford to neglect any method which may contribute a little to a greater understanding Heredity studies accurate and careful estimates of personality and physique good descriptive accounts of the patient's actual condition a thorough investigation of all the personal and environmental causative factors are indispensable and essential it is only after we have come to a careful evaluation of the information derived from the above examinations that we have any need to consider even the possibility of psychoanalytic treatment in the affective disorders There are too many unsolved problems to allow us to talk of specific methods of treatment

Insulin, Electric Shock Treatment, Leucotomy

The introduction of the above mentioned forms of treatment has ushered in a new era and has completely altered the prognosis and out

come of many cases which might otherwise have continued to run a protracted course. Treatment by cardiazol was at one time also effective but its place has been entirely taken by electric shock treatment. In this note on treatment it is not necessary for me to describe the various techniques but I wish merely to record the results that may be anticipated.

It is reasonably true to say that all of the above methods of treatment were in the first instance directed towards the possibility of effecting an improvement in cases of schizophrenia. But later when it was realized that the cases, which responded best were those in which affect and tenseness were retained then it was not long before we began to obtain results with depressive anxious states which often verged on the miraculous. It has indeed been gratifying to know that in many instances attacks of severe depression which under ordinary circumstances might have been unduly prolonged, could be cut short by means of insulin or electric shock. We now have reached the stage where in depressive states which have failed to make the spontaneous recovery expected electric shock treatment, especially, can be of inestimable help. Furthermore such improvements and recoveries are not confined to exogenous or reactive depressive states but occur also in endogenous states so that the manic depressive cycle has been broken. I am convinced, however, that it is still better practice to allow recovery to occur spontaneously rather than by electric shock treatment provided that the misery is not too great nor the attack too prolonged. Many psychiatrists employ electric shock treatment in manic states as well as in the depressive ones but I have never been able to satisfy myself that this was good practice. I may be wrong but I have always felt that there has been a tendency to use this treatment in manic states in a disciplinary way, to give a patient this treatment just as in former days one prescribed a padded room, a restraining sheet, a continuous bath, a hypodermic injection. In consequence I am opposed to prescribing electric shock treatment in a continuous maintenance manner. It is too serious and too drastic a method to be used in any light-hearted manner, and I believe that, if a satisfactory result is not obtained after reasonable treatment (6-12 shocks), that it is more advisable to allow the case to take its natural course rather than embark on prolonged electric shock treatment which often produces merely an aftermath of fear.

Electric shock treatment does practically everything that is claimed for insulin, and it has so many advantages that it is much to be preferred

The so-called paranoid schizophrenics who are supposed to do so well with insulin probably are not schizophrenics at all but are more nearly allied to the manic depressives as defined by Kraepelin e g the "querulents described by Specht and Nietzsche the periodic paranoiacs of Bleuler, the abortive paranoias of Friedmann and Gaupp

Furthermore electric shock treatment is the method of choice in involutional melancholias It is amazing to see cases, which formerly might take a year or eighteen months, or more, to recover, do so after comparatively few treatments

In those cases which are particularly resistant and which have defied all other efforts recourse to bilateral frontal leucotomy is not only advisable but strongly to be recommended I have seen results so gratifying and so successful which in one s earlier days could never have been thought possible

By no means the least beneficial effect which has been accomplished by the above methods of treatment is the enthusiasm and interest which has been introduced into the work of the mental hospital There is better individual care a more active therapeutic atmosphere a greater spirit of hope

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CHAPTER X

PSYCHONEUROSES

By T. A. ROSS

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The psychoneuroses will be treated of here entirely from a practical point of view. The aim is to introduce the general practitioner to the practice rather than to the theories of psychotherapy. He is apt to fight shy of these patients, at least to fight shy of treating them by psychotherapy. Of late years this subject has been made more and more of a mystery, and by that is meant not only something mysterious but something of the nature of a craft into which only the specially initiated can enter. But for the majority of patients a simple psychotherapy is all that is wanted, and it is probable that the failure of the orthodox profession to provide this is responsible for much of the quackery which is so rampant to-day. The methods described in this article will not cure everybody, but in the author's hands they have worked better than any other, and his hope is that they will be employed by general practitioners. For seventeen out of the thirty-eight years since he qualified the author was a general practitioner, and most of what he learned of psychotherapy was learned while he was still a general practitioner. The twenty-one

years that he has practised as a specialist have served chiefly to confirm what he learned in the earlier years He has made several excursions into other regions of treatment and has read a great deal of other methods, but has felt that it is not easy to improve on the earlier methods for the majority of patients These are largely the methods which were taught by Dubois and Dejerine, both of whose books are recommended The author has also learned a great deal from the publications of Freud and his followers, but for practical purposes he prefers the simpler plans of the two first named writers

It is not possible in considering rational therapy in any department of medicine to avoid theory altogether, and in this department especially is that true, but the theoretical discussion has been kept as compressed as is consistent with intelligibility Some of this theory is treated very dogmatically because space is limited

Definitions

A psychoneurosis is a congeries of symptoms which are of the nature of a crystallization of the emotional reaction These symptoms as we shall see later, may be either mental or physical, e g preoccupation, anxiety, failure of concentration, or faintness, vomiting palpitation, etc They depend on the continuation of emotional disharmony (mental conflict) and disappear when harmony is restored Organic disease may be present, but neurotic symptoms are never directly dependent on it, they may be indirectly, if the patient is anxious about his disease

This definition disposes of the question whether morbid physical states may cause psychoneurosis If they cause symptoms which resemble those of psychoneurosis that does not make the illness a psychoneurosis Such conditions are common in mild infections and in alterations of the normal endocrine balance The illness will then be a toxæmia of some sort Proof of this will be found later It also shifts the emphasis from the symptoms of the disease to its origin for it is there that treatment lies There is little interest in the symptoms of psychoneurosis compared with the interest inherent in their cause It is obvious that the treatment of a mental disharmony must be very different from that of a mild coccal infection, though a patient suffering from either may complain of little else than exhaustion

After this the word ' neurosis will be used in the same sense as psychoneurosis viz in the sense defined above

Psychoneurosis differs from psychosis in that it occurs in people who live in the same intellectual frame of reference as their neighbours whereas in any psychosis there is always some region of thought where phantasy has become reality

Frequency of Neuroses in Practice

The study of the neuroses may well begin with a consideration of their frequency. The first thing which emerges is that they are much commoner than is usually thought. The work of Millais Culpin and May Smith of London and that of Halliday of Glasgow have brought this out. The latter observer dealt with patients who were treated for various illnesses under the British Insurance Acts, and he found that about one third of the patients returned as suffering from organic diseases were in fact suffering from neurosis. Halliday's examinations were carried out by a team of specialists and checked also by an independent observer.

It may be objected that the English Insurance Acts create invalids, but Culpin and Smith's investigations, which were carried out in various factories and workshops and among students, all of whom were seemingly in good health and at work, showed that a large number of apparently healthy people are suffering from neurotic symptoms. Apart from the fact that many of these people could be relieved of their discomforts so that they might get more joy out of life, it is certain that the quality of their work could be greatly improved if they underwent proper treatment for these various symptoms.

These authors in their report of 1930 had examined over one thousand individuals. Among the factory workers about fifty per cent were well, the remainder had some symptoms. Sixteen to twenty per cent had these symptoms in fairly severe degree. Among students only about twenty three to thirty per cent were free from symptoms.

Clinically many writers on organic diseases have stressed the importance of psychogeny. One of the most important is Alvarez, who declares that most of the dyspepsias are functional, that is, psychogenic. Alvarez is particularly important because he has for long been a student of the physically determined dyspepsias.

It may be assumed then that the neuroses are common and that they are apt to masquerade under the titles of physical diseases.

Before we take up the examination of the neuroses we must emphasise that any given patient may be suffering from both physically determined and mentally determined illnesses; in a sense, as we shall see later, every patient in the world must be suffering from both kinds of illness. Our isolation here of the mental illness is partly for convenience of study, partly because the mentally determined part of the illness is the one more easy to attack in certain examples of illness. This view, that bodily and mental illnesses go together, must be held to run through the whole of this article on treatment of the neuroses, but it will not be mentioned explicitly again.

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THE EMOTIONAL REACTION

It was stated in the opening definition that the symptoms of neurosis were of the nature of a crystallization of the emotional reaction, and that these reactions might be mental or physical

Let us take the physical first The state of grief frequently will be accompanied by a flow of lachrymal secretion in excess The state of grief then may be said to cause tears the tears are the reaction to grief It is true that William James said he thought it might be the other way, and that grief was the sum total of the sensations which were received in weeping from the over active glands the wet cheeks, the choking bosom It is probably true that the sensations derived from these visceral departures from the ordinary do enhance grief but something happened before they started There was the receipt of bad news

If then we say that the bad news caused the weeping and other symptoms these symptoms are a bodily reaction to grief the grief being the appreciation that the news was bad It is mere common sense to say that the mental state of grief caused the physical symptom of tears We shall find that the more of common sense and the less of theorizing we put into our study and treatment of the neuroses, the better our results will be It may, however be pointed out that this does furnish an example of how, even when the symptoms are primarily due to a mental state, a bodily state comes in reciprocally as a cause The tears and sobbing do for a time augment the grief, and the thing tends to keep itself going by the formation of a vicious circle Circles of this kind will be met continually in the course of our study Let us take some other examples of the emotional reaction

The sight of succulent food will make the mouth water, the sight of something disgusting in the food may make the subject retch and vomit A terrible sight may make the heart stop beating, and the subject may faint A medical student at his first operation may do this Fear and anger both may cause palpitation of the heart fear may cause a number of other reactions, dilatation of the pupil sweating polyuria and diarrhœa, trembling, pallor of the skin, giving way of the limbs so that the subject may fall Shame may cause dilatation of the skin capillaries Anxiety may cause headache, loss of appetite, drying up of saliva in the mouth, thus the tongue of the prisoner waiting for the jury to come in may cleave to the roof of his mouth We see that emotional mental states may cause bodily symptoms all over the body, and that in many instances these symptoms are just the same as the symptoms of physical disease except that, as a rule, they are shorter lived If it be hat the symptoms of neurosis are but crystallizations of these reactions, it will be necessary to account for their prolongation, so that instead of lasting for

seconds or minutes they may endure for months and years It will be one of our objects of study to do this

We must first however, turn to mental symptoms such as apprehension anxiety phobias loss of concentration poorness of memory It is obvious that depressing ideas may cause these If I am worried about something immediately it will become difficult for me to concentrate on work for the worry will keep coming into consciousness *If I have not concentrated it follows* that my memory will suffer for memory depends partly on concentration If I am worried I must become apprehensive and though this must be studied specially in every example we can believe without difficulty that I may become more and more apprehensive about other things besides my original worry the commonest symptom which arises from this is fear of insanity which is not surprising If my brain will not work it is natural that I might think that I am going mad

We see that these bodily and mental symptoms of mental disturbance are as real as if they had been brought about by physical agencies This might seem a thing unnecessary to say but the suggestion is often made that *symptoms which are dependent on mental states are imaginary* *His headaches* are imaginary is frequently implied and sometimes said This kind of statement can be examined in more ways than one

As it stands it is nonsense First if I say I have a headache that is either a true statement or it is not If it is not true I am not imagining that I have a headache I am telling a lie and it would be more honest to call me a liar straight out Secondly one can imagine i e make an image of certain things When I think of a horse I can imagine make an internal image of a horse which in a sense I then see It is a faint image and it is not projected Again I can play a tune in my head and thus make an auditory image If these images are projected that is appear to be seen or heard in space outside my body they are called hallucinations I cannot however by any method make an image of a pain Surely that means that I cannot imagine a pain Thirdly if we consider the motor symptoms of the emotional reaction it will be seen at once that it is sheer nonsense to explain them as being imaginary

A medical student who faints at his first operation does so as truly as if he had *some form of heart disease the soldier who was seized with diarrhœa* as he went over the top had exactly the same physical condition as if he had been given a large dose of salts The angry or frightened man who gets palpitation gets it exactly as if he had exophthalmic goitre and it can be felt objectively If these things are true for motor symptoms what right have we to assume that they are not true for sensory symptoms? None whatever

On the whole these symptoms of the emotional reaction are not under the influence of the will The mental states, which initiate them, are emotional rather than intellectual, and the will has very little power to stop them It would be untrue to say that it has none, for there can be no doubt that for short periods people can pull themselves together and stop weeping inhibit the frequency of urination, even stop vomiting or diarrhœa, but as a rule only for short periods, and there are many symptoms such as blushing and tremor which cannot be stopped at all by exercise of the will

In connection with this it may be well to consider the limitations of the will Patients suffering from neuroses are frequently recommended to pull themselves together and exercise their wills I do not think that I have ever seen a patient who has not at some period been told to do this The healthy do not have to do this, not at least to any extent, and the sick cannot to the extent needed for success If I come in after my day s work and see on the one hand a pile of letters waiting to be answered and on the other some seductive amusement, I must make at least one effort of will before I sit down steadily to the letters but if I find that I am constantly picking up a novel and that I have to make repeated efforts of will to get back to the work, I may as well give the work up, for I shall do nothing of any value We cannot, that is, do proper work, if we are always having to pull ourselves together and exercise our wills if the work does not go on by itself as it were, after I have started it, there is no use my trying further The whole apparatus is very like the engine starter of a motor car it can be used for a few seconds, but if the engine does not run by itself after a short use of the starter, then there is something wrong which needs attention It is true that the car could be run for a few yards on the engine starter alone, but it is bad practice Similarly, one can get some work done by constantly pulling oneself together but never good work and always work that wears the machinery

The Value of the Emotional Reactions

In those reactions which we are considering their value is as a rule not obvious now but a little consideration reveals that at one time they were probably useful Palpitation for example, is the common reaction to both fear and anger It does not seem to be helpful now to the angry or frightened man Cannon however showed many years ago that fear and anger stimulated the adrenal secretion (an emotional reaction), and that this latter was a substance of importance in the conversion of glycogen into sugar Fear and anger should be the preliminaries to intense and prolonged activities, running away or fighting For both of these an increase of sugar in the muscles will be wanted So here one part of this emotional reaction is of use to the indi

vidual The value of the other part the palpitation is obvious now The circulation must be speeded up and increased in force to drive the waste products quicker out of the muscles and to speed up the delivery of the fresh sugar so that the man may fight or run for a longer time These things were of value not so long ago and if civilization breaks down will be of value again At the moment there is no place to run to and no one to fight and therefore the reaction is merely an inconvenience just as in a motor car to accelerate the engine when it is running idle is merely to shake the car

Insomnia is a common accompaniment of anxiety There seems little value in it but it was not long ago that it had value Till lately what was the anxiety of the average man? Not that his stocks and shares would slump through the night but that something physically menacing or disastrous would happen at that time and that he had better keep awake to ward it off If he were specially fearing attack and lay open to it it would be wiser for him to keep awake And so when one looks at a drawbridge or a portcullis one can think that at one time it was a good kind of hypnotic

Some of the reactions are of direct value now The medical student who faints at his first operation because the sight is too horrible escapes seeing it any more The person who vomits or retches at the sight of disgusting food at least does not swallow it nay the disgust itself is often a preventative of that the nausea and retching do but reinforce it

We are not able to see value even historically in all the emotional reactions though it is very obvious in some now or formerly This value of the simple emotional reaction is of interest not only in itself but because as we shall see later the compound reactions which we shall study presently as neuroses also have value

The Conditioned Response or Reflex

Pavlov demonstrated that if hungry dogs were shown meat saliva dropped from the jaws This is of course just the reaction we have been studying but it must be pointed out that this reaction is not innate like the knee jerk or the reaction of the pupil to light Meat shown to puppies which have not yet tasted it produces no secretion It acts therefore in grown dogs because the taste of meat did originally produce the secretion The reflex can however be modified so that it is produced by an indifferent stimulus which has nothing to do with meat at all If a bell is rung every time that meat is shown to the animals which are then allowed to eat the meat after a number of seances the sound of the bell alone will produce the secretion That is to say something apparently indifferent has caused the reflex to act The importance of this will emerge frequently

Comparison between the Symptoms of Neurosis and the Emotional Reaction

The symptoms of the emotional reaction differ from those of neuroses chiefly in their frequency and duration Many girls will blush if they are embarrassed, but in neurotic blushing the patients may blush every time they come into the presence of strangers and do so with such intensity and for so long that they will eschew company altogether Again anyone may get palpitation, if agitated, but in healthy people that dies down very soon in a few seconds or minutes in the nervous, however, it may continue for hours may awaken the patient out of sleep, may come on several times every day Or any person with grave anxiety may get a headache or be put off his sleep but in these patients headaches lasting for days will come on nearly every time they do not get their own way, and for weeks or months they will get very little sleep, even when it would seem that they are getting their own way It is of interest, therefore, to consider why the emotional reaction should become lengthened and more frequent so that from having been a short and sometimes as we have seen, a helpful reaction, it can become one of the most disabling illnesses with which we have to deal The answer to this is complex indeed in many examples when we have answered this question fully, the case is finished and the patient is cured — not in every case, but so important is this question that to answer it is probably the most crying necessity in the treatment of these patients We shall, therefore, consider certain common factors in the prolongation of the emotional reaction

(1) The reaction may be prolonged so as to become illness because it is dreaded either because it is so uncomfortable in itself or because of the consequences which it is supposed that it may bring about Timid persons who are easily frightened may get palpitation from the mechanisms we have been studying They easily come to believe that their hearts are not strong and that they must be careful about them In this belief it is unfortunate that their natural timidity may have become increased by doctors and this in two ways

The doctor may himself, because he does not understand the real pathology of the case but fears that it does represent some debility, advise that the patient should be careful not to strain the heart If the patient believes this and follows the advice he will get much more palpitation Every time he has to do something which entails some extra cardiac exertion, however slight, he will be afraid to do it and because of this fear, he will get more palpitation The more palpitation he gets the more will he be sure that there is something wrong with his heart, and the more sure he is of this the more palpitation will he get There need be no end to this vicious circle, and there have been

numerous instances where the condition has gone on for twenty years or more and then been cured when the patient s beliefs had been changed

On the other hand the doctor may say that there was nothing wrong The result may be equally disastrous The patient feels the palpitation to be told that there is nothing wrong can only mean that the doctor does not under stand and as most people do not seem to the patient to understand he passes into a state of despair and this causes the symptom to be perpetuated

Other examples may be found in other parts of the body Pain in the eye or some difficulty in reading may come on as an original emotional reaction The letters become blurred after the patients have read for a short time Patients suffering from this will go from oculist to oculist They may have their slight astigmatisms corrected with only temporary benefit Nearly all these patients have come to believe that they will strain their eyes i e damage them if they read too long So soon as they learn that there is no risk of this the symptom disappears

The writer had a patient who had had such symptoms for thirty years viz pain in the eyes so that she could not read for more than ten minutes at a time This symptom disappeared forthwith after one explanatory talk She had consulted an oculist thirty years before and as she was leaving the room he had said casually to her Don t strain your eyes as one might say Good luck ! This had planted in her the fear that she might easily strain her eyes and the pain was a sharp automatic reminder to her that she had better stop using them

Or a dyspepsia may be kept up because each meal is eaten in a state of fussy anxiety every article eaten is suspected of being indigestible Meals eaten in this spirit usually will be followed by discomfort

It is probable that this fear of the symptom is one of the most important causes of the prolongation of the emotional reaction to such an extent that it becomes an illness

(2) The reaction may have become prolonged because of associations which produce a conditioned reflex A certain woman had violent headaches which had been present since childhood and while her history showed that they were frequently precipitated by emotional disturbance it was also clear that certain other things produced them also Constipation produced them so unluckily did an aperient so did certain other named medicines and certain articles of diet The point which was tackled first was the aperient and after some arguments she became convinced that it was the belief that aperients produced a headache and not the aperients themselves that did in fact cause the symptom When she changed this belief the headaches no longer came with aperients Now it is clear that at some time when she had a headache and had also taken an aperient she had associated the two had come therefore to

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the patient had not seen him at the window but had heard him at the front door A very clear case of malingering But in fact this patient had cancer of the pancreas and was dead in a few weeks He malingered because no one would believe that he was ill and in pain He did his best to make them understand I think it a sound rule that if apart from money compensation cases one suspects malingering then one is in the presence of a man who feels he is in a tight corner As regards the compensation cases I do not think that as a rule these patients are malingering but some are

In less obvious ways a symptom will keep in being because an advantage is derived from it A good many years ago a man of thirty five was sent to me because of headaches which came on after eating meat This was supposed to represent some anomaly of metabolism but no treatment had had any effect After some history taking it came out that as a lad he had considered sexual desire to be sinful and of course he had had sexual desire He heard somewhere that meat stimulated sexual desire He therefore stopped eating meat but he was fond of meat and his good resolution was broken frequently After a *time however he noticed that he got a headache when he ate meat* We can easily correlate this with the original view of symptoms being due to emotional disturbance He was liable to sin when he ate meat The idea of sin disturbed him very much therefore eating meat disturbed him Now he never connected these ideas consciously in his mind and very soon he had forgotten all about meat causing sexual desire all he knew consciously about meat was that it gave him a headache There was therefore an advantage which the symptom ensured it kept him from sin We see also that this illustrates the view that the mechanisms become unconscious but continue to exist because of a conditioned reflex Now when I saw him he was married and had long ago abandoned the idea that sex was sinful so that the condition had continued solely because of a conditioned reflex because if you like it was expected It had as it were acquired autonomous power without reference to its origin When all these things were dragged into the light the symptom disappeared Why should they? While the thing was going on it was to him a mystery Mysteries in oneself are disturbing and may therefore precipitate symptoms The discussions dissipated the mystery I think too that a conditioned reflex which no longer is of value tends to disappear when it is brought into consciousness Or we may say that before our discussions he dreaded eating meat after them he did not

It might be objected that it is rather blowing hot and cold to say that the emotional reaction may be prolonged because it confers an advantage that is in a way because it is wished and also that it is prolonged because it is dreaded But the reaction itself is never wished No one really enjoys a headache or indigestion These symptoms however may be much more tolerable than the

believe that the aperient could cause headache, after which it usually did It may be said that this association is merely a repetition of the first cause, the dreading of the symptom At bottom this is absolutely true, but this second cause must be stated because this patient would say "I was not upset in any way, nor was I thinking that, if I take a pill, I shall have a headache I am quite sure I was not thinking it It is simply that a pill always acts on me like that" In like manner the dyspeptics will tell you that they were not upset before their meal, nor were they thinking that this meal would give indigestion, but that it was just a fact that they never could digest rabbit or parsley or whatever it is

(3) The symptoms of the emotional reaction may be prolonged because there is an advantage to the patient in remaining ill Here we come on the question of the malingerer, and I think one may say without hesitation that malingering is rare We have already seen in the last section that by association of ideas, symptoms may be prolonged, though there was no fear of the symptoms in consciousness that the emotional reaction could be continued because of some process which is not conscious, and indeed it must be obvious that many unconscious mental processes go on in all of us The malingerer is one who says he has symptoms which in fact he is not experiencing The neurotic is, as has been shown, experiencing his symptoms, and the benefit which they may be conferring may be entirely hidden from the patient's mind No one who saw the worst cases of neurosis during the war would have thought that they were all malingerers It is certain that some of them were, but men who continued in violent coarse tremor day after day and all day for months were certainly unable to do that voluntarily, they were in a state of great discomfort and if you had told them that they were doing this to get out of the war, they would have been angry If you had merely said that there was a great advantage in doing this, they would not have understood what you were driving at And yet, if they became convinced that they would get out of the army as soon as they were well, they usually became well quickly

During the last ten years, apart from compensation cases the writer has seen only one undoubted example of malingering It is worth recording because if blame were to be given to anyone because this man malingered, it attached to the doctors and not the patient He had complained of abdominal pain and had been very carefully examined by modern methods, nothing had been found His doctors were sure his case was functional One day his own doctor, visiting him in his own home, passed his bedroom window before he came to the front door He noticed as he passed that the patient was sitting up in a chair reading the newspaper A moment later he was in the room He found the patient in bed writhing with pain and was informed by the latter that he had been like this for half an hour The doctor knew, of course that

mild infection as from a suppurating sinus may cause symptoms very like those of neurosis and the operating surgeon when he has cured one or two patients with symptoms like those of neurosis is apt to think that all examples of neurosis probably fall into the category of sepsis somewhere But how then are we to account for the patients who became well after psychotherapy alone? These patients if they were suffering from a chronic mild infection could hardly have had that infection benefited by what after all is merely conversation

The argument may be used that because a patient became well after psychotherapy that is no proof that the psychotherapy had anything to do with the recovery That is of course quite true if we talk only of individual cases But the argument can be used for other treatments besides mental ones The fact that a person lost nervous headaches after the correction of an astigmatism is by the same reasoning no ground for believing that the cure depended on the eyeglasses The fact that a person lost several symptoms after an operation for sinusitis is no proof that the operation cured anything What is good argument for the one is good for the other However if each kind of therapist mental ophthalmic or surgical can bring forward large numbers of examples where cure followed his administrations we can rule out lucky coincidences for these cannot occur on the grand scale Sometimes the removal of sepsis may remove widespread though mild chronic symptoms symptoms like those of neurosis but I think it can be stated that mild astigmatism of say half a diopter does not cause any symptoms at all It is true that if it is corrected there is increased sharpness of vision but soft slightly blurred outlines are never complained of by anyone who does not already know that he can get sharp outlines and they do not cause headache I am not now referring to people who do very fine work the headaches which I am discussing and which are cured by oculists are quite common in people who do no fine work at all The oculist who cures them is a man who takes infinite pains and one who impresses his patients Some oculists who have heard about psychotherapy have found that they now get as good results from talking to their patients as they used to get formerly by correcting these low astigmatisms Please observe that I am not in the least inveighing against the correction of effective errors of refraction Effective hypermetropia may of course cause pain It is these tiny errors which are sometimes alleged to but in fact do not cause these large results In my experience the cures of neurosis which result from prescription of cylindrical lenses do not last I have seen many patients who had visited four or five oculists in the space of two or three years After each visit there had been benefit for a few weeks and then relapse And if the theory of the neuroses put forward here is true that is what one would expect The oculist says to the patient your illness is reflex due to eye strain I can

might call it his conscience, and if you go back far enough, you will find that that is derived from the image he made of his parents and their rules That something then acts as if it were a mind, and also as if it were unconscious it is, therefore, convenient to call it an unconscious mind We shall find many other examples as if this mind were acting We shall do well to remember that it is a conception and not a fact, and we must be careful not to use it unnecessarily nor far fetchedly Broadly speaking there is a tendency to which many exceptions occur, for ideas which are repugnant to the personality to drop out of consciousness Note that the term is *drop* out It is not a voluntary act but occurs seemingly spontaneously, and when it has happened, consciousness knows nothing more about it, not even that it ever existed This dropping out of ideas is called *repression*

These ideas, though out of consciousness, are not, however, non existent We have seen and shall see often that they appear to be active and to influence the subject Attention will be drawn to this from time to time in the description of actual cases The ideas may also recur in highly distorted forms in dreams For example a young man saw a naked woman with an alluring breast, which presently turned into a hideous mouth of an animal and tried to bite him The woman was his own sister He remembered that he had had incestuous desires for her, but that he had forgotten them, that is repressed them into his unconscious Here we have the desires not only present, but also there is a picture of appropriate punishment

Space forbids a full discussion of the unconscious, what is of value practically will keep cropping up, but this receptacle for the undesirable is only a part of the unconscious

Some Objections to Psychogenic Views

Two views have been put forward here, viz (1) that the neuroses are very common and frequently masquerade as physically determined conditions and (2) that they are of mental and not of physical origin Some objections to this second view must be met A large number of these minor medical illnesses which Dr Halliday and people like myself believe to be mental are constantly cured by physical means, by drugs, by light, by holidays and many other agencies therefore, say the protagonists of these measures the illnesses must be physical Thus one finds that certain oculists cure many nervous people by correcting their astigmatisms with unusual care, certain rhinologists cure many nervous people by operations on the nose, by draining their sinuses by removing spurs, by straightening deviated septa, certain endocrinologists cure them by preparations of internal secretions and so on Now some of these cures are what may be called legitimate There is the question of diagnosis, some

mild infection as from a suppurating sinus may cause symptoms very like those of neurosis and the operating surgeon when he has cured one or two patients with symptoms like those of neurosis is apt to think that all examples of neurosis probably fall into the category of sepsis somewhere But how then are we to account for the patients who became well after psychotherapy alone? These patients if they were suffering from a chronic mild infection could hardly have had that infection benefited by what after all is merely conversation

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cure that He does something which the patient can appreciate really has been something for now things have clear outlines in a way they had not Hope therefore, has been instilled twice, once by the doctor and once by his glasses Therefore there is improved health, for hope acts in the opposite way to the depressing emotions which cause symptoms After a little however, something happens to upset the patient, and again the symptoms return The oculist or another oculist shifts the cylinder round a degree or so and again hope is instilled and again there is temporary relief But each time the amount of hope acquired is less than the time before, and each period of improvement is shorter than its predecessor I dwell on this at some length because it is a good example of an important principle, the elaboration of which gives us good insight into the value of various ' cures

Gynæcology affords a great field for this study Many neurotic symptoms are pelvic in location, and therefore, much local treatment has always been given Fifty years ago most women had pessaries, later they had operations A well known gynæcologist wrote to me a few years ago to say that he had read a book of mine and tried its methods he wished to say that since doing so he had given up many of the local treatments for minor gynæcological troubles with great benefit to his patients Had he studied the literature of his own subject of sixty years before he would have found that his celebrated predecessor Playfair had done the same thing that having read Weir Mitchell s "Fat and Blood ', he had given up inserting pessaries into women and had attended to their general health only, with increased benefit to them

Intestinal toxæmia from constipation frequently is credited with causing many nervous symptoms It is more than doubtful whether constipation causes any symptoms at all except perhaps painful stools When patients who believe that their symptoms are due to this change their beliefs and lose their symptoms they may still be constipated now seemingly without harm

We shall find two points about the treatment of local conditions, one is that they work for a short period only and during that period they cure very many people and secondly they are used successfully only by certain specialists While there are ophthalmologists who can "cure' neuroses there are many who deny that the phenomena occur which their enthusiastic brethren publish The specialists who do not get these results usually are as capable in their specialty in every respect as the others, except that they do not cure these patients They should not however, deny the phenomena which their colleagues report the phenomena are there It is the explanation which is wrong Those who do not get these cures are of a sceptical turn of mind If they do prescribe glasses they may tell the patient that, though vision will now be perfect the nervous symptoms probably will persist That kind of prescribing will never help any nervous patient even temporarily

The other point about these treatments curing only temporarily is an obvious corollary of the views which have been put forward. *An enthusiast with a reputation puts forward something or is supposed to put it forward as Metchnikoff in the early part of this century was supposed to have put forward sour milk as a cure all.* It caught on and various neurotic patients felt better as many will when a fresh hope has been put before them. The more cures there are the more there will be. Then a few failures occur partly because there are indeed some people who are ill from other reasons than neurosis partly because there are a number of sceptical disillusioned neurotics. These failures too are talked about and others begin the treatment with less enthusiasm and gradually the failures accumulate and another treatment joins the list of forgotten things. Perhaps a reader of these words will protest that he still gets good results from the Bulgarian bacillus and if there is one he must be congratulated on having preserved a youthful spirit of hope which must be most beneficial to his patients. *In this connection I would point out that certain tenets* persist longer than most quackeries have done and I think that the reason why they *do not decay is that they proclaim however erroneously a great truth viz* that the symptoms of illness are influenced by the state of the mind a truth which orthodox medicine often forgets.

There is yet another point. The physical conditions which are alleged to cause neurosis are always trivial. It is displacement of the uterus and not cancer of the uterus; it is the smallest astigmatisms; it is nasal spurs and deviated septa; it is mild infections; in the war it was the unwounded only who developed neurosis. It is odd that the less the physical hurt and no one could be less hurt physically in the war than the subjects of shell shock the greater the symptoms of neurosis.

I trust that sufficient argument has now been advanced to inculcate the belief that the neuroses are psychogenic or to put it another way that many chronic invalids are suffering because of mental disharmonies rather than because of physical abnormalities. The insistence on this is not academic because failure to recognize these *disharmonies may well mean failure to relieve illness.* Energetic treatment of the mild physical states discovered far from helping the *patient may make him worse.* Almost any treatment may for a time abolish the symptoms of neurosis but as the patient has learned nothing about the mechanisms by which depressing thoughts and events can bring about symptoms he will become a prey to the next set of depressing thoughts which come along. Something else or even a modification of his former treatment may help him again but after one or two relapses he will become sceptical and more and more resistant to any treatment. It therefore does matter very much in what manner a patient is cured.

Classification of the Neuroses

This is unsatisfactory Many classifications have been attempted in the past, but none are of much value When we consider that a neurosis is the gradual accretion of the bad mental habits of the lifetime of an individual, and that that individual's experience has been different from anyone else's it is not surprising that the neuroses do not easily go into categories Those who have studied these disorders in well ordered places, where the people are docile such as Germany, have assured me that the neuroses and psychoses fall into ordered categories there much better than they do among individualistic and comparatively unruly peoples like the Celts and Anglo Saxons This is, I think, very likely to be true But if it is difficult to classify the neuroses there are certain reactions which patients display which are of some value There are three on which special emphasis may be laid —

1 The anxiety reaction
2 The hysterical reaction
3 The obsessional reaction

Any one patient may show all three reactions, either simultaneously or successively but there is a considerable number in which one set of symptoms or the other predominates If all anxiety has been converted into bodily symptoms and if there is no anxiety left, we are in the presence of the hysterical reaction, in which the mental state may be one of placid indifference This state of indifference may be complete but often there is some anxiety If the conversion has not been complete, and there is a mixture of anxiety and bodily symptoms, some authors call the symptoms 'anxiety hysteria" If the conversion into bodily symptoms is complete and no manifest anxiety is left they call it 'conversion hysteria Just as the complete conversion hysteric may have no anxiety so there is a class of anxiety patients without bodily symptoms of any sort These are the patients with phobias, feelings of unreality and the like but no bodily symptoms whatever They form a fairly large class It cannot be denied, however, that in practice these categories often are mixed The phobics are met with in pure form oftener than the hysterics

The Anxiety Reactions

The symptoms which are now about to be studied are those which are derived from anxiety using that word in a broad sense and including in it such emotional states as doubt mental conflict, boredom, disappointment, that is to say, depressive emotional states The symptoms may be bodily or mental Some of them have been described already when we were discussing the nature of the emotional reaction when this has been done the symptom will be men

tioned here only briefly other symptoms of importance will be examined in greater detail It cannot be hoped that every possible symptom will be spoken of, as it must be repeated that there is no organ or function of the body which may not be affected by emotion

It will be convenient to describe these symptoms regionally for it is regionally that the patients tell us about them We shall begin with the somatic head symptoms The commonest are headache odd sensations in the head such as that of a band tied round it pressure feelings bursting feelings feelings as if the head were packed with cotton wool These are all very common but the number of sensations described is really endless

The mental symptoms are more important and some of them must be spoken of in detail viz insomnia fears phobias and apprehensions depression failure of concentration poor memory shyness in company bashfulness sense of inferiority various disagreeable ideas the sense of unreality If it were impossible to give a complete list of the bodily symptoms much more so is it to give one of the mental for every idea possible to the human mind can be distorted into a symptom

Before we leave the head reference also must be made to the symptoms connected with the special senses — ocular and aural especially The principal ocular symptoms have been referred to on page 575 The chief aural symptoms are giddiness deafness and vertigo These are probably all very common. Nasal symptoms e g paroxysmal rhinorrhœa also are common and operations used to be common on this account

Insomnia is one of the most important symptoms of the anxiety state not of great importance in itself but because of its associations Most people consider it very serious and believe that if it persists they are in grave danger of losing their reason or that their brains will deteriorate in some way There is no doubt that these beliefs are the most potent factors in ensuring that the insomnia will continue It commonly begins in this way Some anxiety gives the patient a bad night if he has a second it is probable that he will begin to be anxious about the insomnia itself and this anxiety will ensure a third bad night and this will make him still more sure that he will be ill or mad in consequence and so he gets another bad night and so on ad infinitum

Now while it is undeniable that sleep is important it is possible to exaggerate its importance Most people seem to think that about eight hours is the proper allowance and they may be reminded of John Hunter s dictum six hours for a man seven for a woman and eight for a fool For very long periods a man can go on with much less than six if he does not begin to get anxious Many brain workers who should theoretically require more sleep than those who do not strain their brains overmuch have habitually done with much less all their lives They would never have put out the quantity

Classification of the Neuroses

This is unsatisfactory Many classifications have been attempted in the past, but none are of much value When we consider that a neurosis is the gradual accretion of the bad mental habits of the lifetime of an individual and that that individual's experience has been different from anyone else's it is not surprising that the neuroses do not easily go into categories Those who have studied these disorders in well-ordered places, where the people are docile such as Germany, have assured me that the neuroses and psychoses fall into ordered categories there much better than they do among individualistic and comparatively unruly peoples like the Celts and Anglo Saxons This is, I think, very likely to be true But if it is difficult to classify the neuroses, there are certain reactions which patients display which are of some value There are three on which special emphasis may be laid —

1 The anxiety reaction
2 The hysterical reaction
3 The obsessional reaction

Any one patient may show all three reactions, either simultaneously or successively, but there is a considerable number in which one set of symptoms or the other predominates If all anxiety has been converted into bodily symptoms and if there is no anxiety left we are in the presence of the hysterical reaction in which the mental state may be one of placid indifference This state of indifference may be complete, but often there is some anxiety If the conversion has not been complete, and there is a mixture of anxiety and bodily symptoms some authors call the symptoms 'anxiety hysteria' If the conversion into bodily symptoms is complete, and no manifest anxiety is left they call it 'conversion hysteria Just as the complete conversion hysteric may have no anxiety, so there is a class of anxiety patients without bodily symptoms of any sort These are the patients with phobias, feelings of unreality and the like but no bodily symptoms whatever They form a fairly large class It cannot be denied however that in practice these categories often are mixed The phobics are met with in pure form oftener than the hysterics

The Anxiety Reactions

The symptoms which are now about to be studied are those which are derived from anxiety using that word in a broad sense and including in it such emotional states as doubt mental conflict, boredom, disappointment that is to say, depressive emotional states The symptoms may be bodily or mental Some of them have been described already when we were discussing the nature of the emotional reaction, when this has been done the symptom will be men

regression when one is unhappy is to revert to a period when one received full protection and perhaps petting from the mother or mother substitute Although this is the object of regression it is quite unconscious Now such a regression always is fuller than the patient wants to get the right of protection one must activate childhood fears one of these in this case was conscious the fear on the streets all very young children are afraid of being far from their base But there were activated also certain childhood fears which remained unconscious like the one of the world having a rim This probably was important because the patient was much better immediately after finding it Relief in this way is a common experience and as it is common probably it is true This case furnishes another good example of unconscious ideas being active Such an idea could not become conscious and the patient remain neurotic Had it become conscious and she had still believed it one would then have called the illness insanity and not neurosis If it becomes conscious and the patient sees that it is merely an activation of a childhood fear it usually disappears

Certain fears such as those of insanity fears that the brain is deteriorating and so on have been described already If one is worried one cannot concentrate if one cannot concentrate one cannot remember if one cannot remember it is natural that one should fear that some mental or cerebral degeneration is going on and if some near relative has become insane or committed suicide the fear that this is going to happen to oneself will be greatly increased These are all perfectly rational fears and in contradistinction to the phobias they are amenable to direct treatment by explanation The phobia as we saw is *representative of something else and cannot be discussed directly or intellectually* for the patient knows as well as the doctor that it is ridiculous but the fear can be removed by ordinary explanations

Some psychiatrists profess not to be able to distinguish between phobias and the fears of the insane such as the fear that my neighbour will poison me There is however no difficulty The insane person believes that his fear is justified the phobic knows that it is not

Apprehensions may be vague and the patient may be unable to say what it is about which he is apprehensive *On the other hand he may only be shy* about saying it because in the past he has been laughed at or because he fears that he may be The common apprehensions are connected with fear of cancer and fear of insanity but they may be about anything

Depression is common and must be distinguished from psychotic depression This will be gone into more fully later

Shyness bashfulness a sense of inferiority all are common the two former depend usually on the latter These people have dreaded standing up to the ordinary embarrassments of social contact often because they have been

of work they did, had they slept much And they did not harm themselves At eighty five Humboldt complained that now he had no time to do anything as he had to take four hours of sleep The main difference between people like Humboldt and the average insomniac is that Humboldt was always interested in outside things, while the average patient with neurosis is more interested in his health than he is in anything else Interest keeps us awake Humboldt was kept awake because he was interested in everything under the sun the average neurotic is kept awake because of worry or terror, which are kinds of interest but the wrong kinds Sleep probably is partly that rest which the tired brain needs, but it is also merely a withdrawal from interest Thus people can sleep at a dull sermon or lecture, an interesting one keeps them awake

The dangers of insomnia are then largely imaginary Insomnia does not lead to insanity even though some insanities may start with insomnia Probably insomnia does not even lead to inefficiency, though worry does and it is the worry and not the lack of sleep which leads to lack of efficiency The student who for some object of study in which he is interested cuts off a few hours of sleep does not worry about it, but congratulates himself that he can do with so little sleep and feels well The insomniac, sleeping perhaps as much, does nothing but cry out, 'What can be done for my insomnia?' and in consequence feels ill As soon as patients realize this, they will begin to feel less ill after a bad night, and soon in many examples the insomnia will disappear

Fears, phobias and apprehensions —A phobia is not quite the same as a fear The patient is aware intellectually that his phobia is unfounded, but that does not help him The common examples are fears when in a closed room or a crowded building like a church or theatre, of travelling in trains of walking in the street of crossing empty roads or open spaces, of heights even though there is no danger of falling off Many of these have been given fancy Greek names, which are of no medical value, as the phobia never represents fear of the thing named There is always a distortion Thus a lady of thirty had had a phobia of travelling for twelve years which had come on after a love disappointment She gradually arrived at a state where she could not travel in a train or car or even take a walk of more than a few hundred yards away from home, unless she was accompanied by someone whom she knew very well This seemed to be associated with certain phantasies of childhood, which she had wholly forgotten but which were revived during our conversations such as that the world had a rim and that you might roll or be driven off it, and phantasies that you might be stolen and eaten That is she had regressed as many do under strain to a condition of part childhood where she could get a responsible relative to calm her fears

Regression to some phase of childhood is a common thing The object of

is a very ancient and primitive belief Seligman has described how among certain tribes if a man dreams that he has had intercourse with another man's wife he has to own up to it and pay the usual adultery fine, and in practice he does do it Most people however can be comforted with the thought that we are not responsible for our thoughts but only for our deeds One potent argument has been found useful good intentions which never materialise are of no value whatever therefore bad intentions never carried out cannot be harmful

In the non sexual sphere death wishes are considered very dreadful and yet most people have them consciously It may be pointed out that quite recently in the history of the human race inconvenient persons were never allowed to live long and that means that the death wish was always soon followed by the fact of death especially if the wish were held by a highly placed person That being so we cannot expect to be rid of these ideas soon and we may really plume ourselves on the fact that we so seldom attempt to carry them out

There remain then the disgraceful deeds for which if our friends knew of them, they would never speak to us again These usually are sexual Masturbation probably is the commonest Most adolescents think that this is not only a sin but a blunder that it will ruin their health in all sorts of ways or ruin their future children's health What is the truth about masturbation? Physically it seems as if its results to the masturbator must be the same as those produced by sexual connection Many patients it is true feel abnormally exhausted after masturbation and the explanation has been given that the individual has to do double mental work viz to stimulate himself in the way that his partner would do in ordinary connection as well as do his own physical part This seems very far fetched and I think the true explanation is that the patient feels exhausted because he is depressed at having done something which he believes to be wrong If he becomes convinced that it is not wrong he ceases to be exhausted If patients are asked why they think it wrong usually they will give some religious explanation and say that it is denounced in the Bible The Bible has a good deal to say about sex but with the exception of the story of Onan, which is probably not about masturbation there is no reference whatever to the subject It is arguable that Onan's sin was not so much masturbation as refusing to raise up seed to his brother who had died childless

It is true, however that there is a strong religious feeling about masturbation and this again is no doubt very deep seated It is probably connected with phallic mysteries It is wrong to look on these as merely sexual orgies The phallus is the symbol of the mystery of procreation, and if the gods are offended — and abuse of the phallus by masturbation may offend them because

snubbed, but sometimes because they feel a very real sense of inferiority apart from being snubbed There are four kinds of inferiority which one may possess or believe that one does possess, physical mental, moral or social

Physical Inferiority —Many people with club foot, cleft palate, small or undescended testicles and so on are very sensitive about these things To these obvious conscious inferiorities Adler has added a view, so far as I can understand him, of an unconscious organ inferiority, so that an ill working liver will produce certain mental symptoms of a more or less specific kind This phenomenon he has called organ jargon It is probably but not always true that inferior bodily organs may bring about neurotic states by the discouragement which they cause when one is competing against one's fellows Sensible talks will often help this

Sometimes the individual attempts to compensate for his physical inferiority by a compensatory superiority, we all know the little cock sparrow of a man who struts about Napoleon was a little man, and how much his need to assert himself in consequence led to his career being what it was is a subject for speculation

Mental Inferiority —The patient is always meeting people who know something that he does not It comes as a surprise to him to discover that the rest of us do this too Everybody knows something that other people do not know There are of course different grades some people are much more knowledgeable than others, but a person who has sufficient wit to know that there are many people who know much more than he does is not a fool Indeed this sense of mental inferiority, if not excessive is a great asset People who have none of it are intolerable It makes people who have it do their work well, because they know that unless they prepare it, it will be done badly, and therefore, usually they are more valuable than the man who thinks he can do his work 'standing on his head', and who in consequence often does it very badly The 'inferiority person too is a much pleasanter colleague than the other This person too may feel the need for compensation by a boastful display of any learning he has got We all know the type which has been described as that of a man who puts all his goods in the shop window

Moral Inferiority —These people go about the world with the thought that, if other people knew what their thoughts and acts really were, they would never speak to them again The thoughts and acts in question commonly are sexual but may be connected with death wishes and similar matters There are people there are many people, who do not distinguish very clearly between a thought and an act To think of sex is to commit adultery in one s heart and apparently that is as bad as committing it in person I think that every person whom I have met with this symptom, and they are many, has quoted the twenty-eighth verse of the fifth chapter of St Matthew to me Now this

is a very ancient and primitive belief. Seligman has described how among certain tribes if a man dreams that he has had intercourse with another man's wife he has to own up to it and pay the usual adultery fine, and in practice he does do it. Most people, however, can be comforted with the thought that we are not responsible for our thoughts but only for our deeds. One potent argument has been found useful: good intentions which never materialise are of no value whatever, therefore bad intentions never carried out cannot be harmful.

In the non-sexual sphere death wishes are considered very dreadful, and yet most people have them consciously. It may be pointed out that quite recently in the history of the human race inconvenient persons were never allowed to live long, and that means that the death wish was always soon followed by the fact of death, especially if the wish were held by a highly placed person. That being so we cannot expect to be rid of these ideas soon, and we may really plume ourselves on the fact that we so seldom attempt to carry them out.

There remain then the disgraceful deeds for which, if our friends knew of them, they would never speak to us again. These usually are sexual. Masturbation probably is the commonest. Most adolescents think that this is not only a sin but a *blunder*, that it will ruin their health in all sorts of ways, or ruin their future children's health. What is the truth about masturbation? Physically it seems as if its results to the masturbator must be the same as those produced by sexual connection. Many patients, it is true, feel abnormally exhausted after masturbation, and the explanation has been given that the individual has to do double mental work, viz. to stimulate himself in the way that his partner would do in ordinary connection, as well as do his own physical part. This seems very far-fetched, and I think the true explanation is that the patient feels exhausted because he is depressed at having done something which he believes to be wrong. If he becomes convinced that it is not wrong he ceases to be exhausted. If patients are asked why they think it wrong, usually they will give some religious explanation and say that it is denounced in the Bible. The Bible has a good deal to say about sex, but with the exception of the story of Onan, which is probably not about masturbation, there is no reference whatever to the subject. It is arguable that Onan's sin was not so much masturbation as refusing to raise up seed to his brother who had died childless.

It is true, however, that there is a strong religious feeling about masturbation, and this again is no doubt very deep-seated. It is probably connected with phallic mysteries. It is wrong to look on these as merely sexual orgies. The phallus is the symbol of the mystery of procreation, and if the gods are offended—and abuse of the phallus by masturbation may offend them, because

the phallus was not designed for pleasure only — sterility may result, sterility not only of the human beings, but of the flocks and herds and of the crops The objection to masturbation is certainly deep seated and is religious, but there is nothing in the Christian documents about it Even Onan is not in them

Social Inferiority — When this is felt, it is often a very difficult thing to remove A fishmonger had begun in a very humble way and by his diligence and ability had been able to acquire a large number of prosperous shops The effect on his wife was tragic She had a beautiful car and a beautiful house but she could not, so she said, get the knack of being a lady, and her whole life was utterly poisoned It is of course possible to get people to view things in better proportion, that is part of the general improvement which we shall see takes place with treatment Meantime this is not a thing to be laughed at

Thoracic Symptoms — *Palpitation* of the heart is very common and often occurs apart from exertion It may come on with exertion, especially if the patient has been warned to take great care about his heart It often comes on at night just when the patient is falling off to sleep It occurs also when he is sitting thinking or brooding For example a young man was awakened regularly every night by this symptom at the moment of dropping off to sleep He had been at the war and had been wounded slightly In hospital he was told that if you could keep yourself awake, or if you could get really good palpitation you would be sent home Inhaling strong pipe tobacco was the prescription to ensure the latter A symptom once created is sometimes not so easy to get rid of He got the two symptoms in the form described above but having got home he had to go on with the symptoms so long as the war lasted And even after the peace, fear of what was happening to his heart plus shame at the whole story, kept the symptom in being for a long time

Pains at the heart are frequent and usually alarm the patient very much, who has heard dreadful words like angina and is sure that he has got that condition The distribution of the pain is hardly ever that found in physical cardiac disease it is almost always apical and on the left side, and not substernal It may be more typical in a patient who knows about these things, but this is rare

Paroxysmal tachycardia of physical origin differs from nervous palpitation chiefly because there is no nervous origin to be discovered in the history, and in most instances the attacks are not of daily occurrence as they are in nervous patients

Fainting also is common It is frequent in church and also in theatres and other crowded buildings It may take place at unpleasant sights If histories are taken carefully it will often be found that church was the first place in

which the symptom began and that the patient at that time was anxious about his soul and that for some reason usually sexual i e he was masturbating or having many sexual thoughts and images he considered himself to be a very sinful person In these circumstances it is not surprising that he should faint for fainting provides an immediate escape from the unpleasant idea and also tends to keep him away from the place where such disagreeable things are heard It must be emphasised that these kinds of thoughts are never conscious at least not clearly formulated but they may be described as being in the situation They are not just irrelevant fancies on the part of the doctor They are found in the history all the doctor does is to indicate the coincidence in time of the two things The church then gets connected with the idea of fainting by the same mechanism as the conditioned reflex and thereafter fainting becomes common in church The mind however dislikes the association of sin and church and when this happens we get a mechanism coming into play called *displacement* so that the patient believes that it is let us say the physical atmosphere of the church which he cannot stand This is further elaborated and often he comes to believe that he cannot stand any crowded building and so he faints in theatres and other places He may then acquire a phobia of all crowded places and know that he is terrified of them but now can give no reason at all for being so or he may give a reason which obviously is not the true one such as that he faints in the used up air of a crowded room This demonstrates the truth of what was said before that it is not the form of the phobia which is important but the history of how it was built up The real story will have been forgotten

Fainting might be considered as an instance rather of the hysterical than of the anxiety reaction this point will be discussed presently but meantime it must be pointed out that this is an example of how difficult these classifications are

The object of displacement is to keep the real idea out of consciousness If the patient kept his fainting to church he would not be able to repress the disagreeable idea

Pulmonary Symptoms — Pulmonary symptoms are not common

Digestive Symptoms — Digestive symptoms are very common indeed *Loss of appetite* is one of the commonest results of anxiety That is known to everyone It may be so extreme as to become a clinical entity anorexia nervosa which will be described by itself Along with loss of appetite there usually is relative failure of buccal secretion

Dyspepsia too is common It is known that anxiety alters both gastric secretion and motility In the well known case of Alexis St Martin who had a gastric fistula for a long time his doctor Beaumont observed that when he was mentally disturbed there was cessation of gastric secretion and loss of

motor activity on the ingestion of food In other mental upsets there is sometimes hyperchlorhydria There may, therefore, be a physical basis mentally produced for this dyspepsia The usual complaint is of fulness after meals and it is characteristic that the patient has a list of the foods which he can eat and which he cannot, and that there is no scientific principle to be discovered on which these lists have been compiled They have taken years to make and the patient knows they are right because he has tried them out often It is also characteristic that every dietetic alteration does good for a period, in exactly a parallel way to what we saw obtained in the asthenopic cases (see page 581) Thus a certain lad, who had been a mother's darling left the farm house in which he had been brought up, in order to work in the city He soon became dyspeptic because, it was alleged, of the poor food of the town After a few weeks he returned home, and the dyspepsia disappeared in a few days He returned to town and again became dyspeptic After this he studied and regulated his diet with great care, and as the years went on, became more and more dyspeptic He cut down his diet more and more each time with only temporary benefit, until he was reduced to living on Benger's food which however, was soon followed by the same symptoms After psychotherapy he became well and had no indigestion of any sort for the next fourteen years which brings him up to date The more he studied his diet, the more anxious he became about it The more anxious he became, the more dyspepsia he got Altering his views about the digestibility of certain foods was sufficient to remove his anxiety about meals

Eructations of wind are common and are thought by patients to be signs that their food is not agreeing with them Gastric flatulence in these patients however, is almost always due to air swallowing, the moment the eructation is over is the moment at which a fresh supply of air is sucked into the stomach It is easy for the patient to stop eructating which is a voluntary act, and when he does stop, the trouble disappears very soon

Constipation and *diarrhœa* are both common reactions to anxiety There can be little doubt that certain patients have been brought up with far too serious views about the importance of the bowels being open every day They believe that unless this happens something serious will happen The more they worry about it the worse the condition becomes, either in the direction of constipation or of diarrhœa As soon as they get a properly proportioned view on the matter the symptoms will improve very much Thus a young man was becoming more and more constipated He was taking eight grains of the extract of cascara every day, but was getting very little result He was persuaded that the main reason he was so constipated was that he was worrying about it After one conversation on these lines it is known that he had no aperient for the next eight years Diarrhœa may persist because it confers an

advantage like the exhaustion of the lady on page 578 A man of fifty who had held a pleasant post in a business was suddenly asked to vacate it and to take on commercial travelling a thing he hated This was in the days before motor cars and his work would have to be done by trains He never caught a train Diarrhœa came on every time he was due to go to the station When the firm gave in, and restored him to his old post the symptom disappeared

In the *urinary system* frequency of micturition and excessive secretion are common in states of anxiety If a nervous person has once wet himself the fear of doing so again may cause further increased frequency It may lead to all sorts of secondary difficulties Thus a bashful young man had taken a lady out to dinner and was shy about going to the urinal This increased his desire very much and there was a slight accident The fear of this recurring became so great that he could not travel in a train unless there was a lavatory compartment Once he attempted to break down this prohibition by forcing himself on to the train but just as it was leaving the platform he jumped from it. As the train had gathered a good deal of speed he was badly bruised

Alteration in the chemical reaction of the urine may occur It may tend to become alkaline and deposit phosphates It has been alleged that in this way anxiety may be a factor in the occurrence of calculus

In the *genital system* symptoms are common in both sexes In the male impotence may occur from failure of erection This may be a simple matter needing only a little encouragement or it may constitute a great difficulty Ejaculatio præcox also is common and usually more difficult to cure Shyness a sense of guilt connected with sex which may be conscious or unconscious and dislike of the partner where the marriage may have been forced and therefore distasteful from the beginning or where the spouses have become incompatible or where one has fallen in love with someone else are the common psychological factors which have to be thought of

Pain described as prostatic deep seated and diffuse is occasionally met It is probable that this is commoner than is usually thought as these patients usually go to the surgeon who treats them locally

In the *female* pains aches and discomforts in the pelvic region are common Genital symptoms are also common of which the most important is frigidity this is often dependent on the same kinds of cause which cause impotence in the male such as guilt feeling and so on but in the female the conditions may be complicated by pain This pain which is often described under the heading of vaginismus is brought on whenever the sexual act is attempted The vagina is normally a closed tube and should be fairly dry When sexual desire is present the muscular wall relaxes and a copious secretion of mucus takes place The act can then be performed normally but if the penis is forced into a dry and contracted vagina it is easy to see that great pain may ensue The

more this is done, the more will the affair be dreaded, and the old vicious circle which we have now seen so often, is set up Tracing the sequence back one of the common causes of all this is clumsiness on the wedding night This clumsiness may be mental or physical, the husband may have, sometimes through shyness sometimes through indifference, failed to make love, and unless a woman is made love to, frequently there will be no reaction of relaxation or secretion Or the clumsiness may be physical so that unnecessary pain has been caused, which in its turn causes fear of the act next time That ensures that next time the act will be approached in dread, and therefore there will be further failure of relaxation and secretion and so on Or again in his excitement the bridegroom may have had a premature ejaculation even before entry into the vagina The disgust which this causes may result in prolonged frigidity The symptom may, as in the male impotence, be due to the spouse being the wrong person

The preceding paragraphs do not include the whole of the symptoms of the neuroses which may be found For whatever symptoms may occur as a symptom of physically determined disease may occur also as a symptom of anxiety The above list however gives the commonest local symptoms and indicates how they may arise though it cannot be too strongly emphasized that this is always an individual problem, and that for each patient the doctor must find the particular individual cause There was an old story that a doctor had taken his pupil to see a patient to show him how things were done and had asked the latter why he had dared to eat oysters when the doctor had forbidden them Later the industrious pupil had asked the master how he knew He replied Because I saw the shells under the bed " Some days later the doctor said to the pupil ' Why did you accuse Mr Brown of eating horse?' ' Because,' replied the youth "I saw the saddle under the bed "

Symptoms of Exhaustion —There is one general symptom of great importance in the anxiety syndrome It is very common, and on its management much of our success or failure in the neuroses turns It is the symptom of exhaustion I call it the symptom of exhaustion and wish to differentiate very sharply between that conception and the conception of the fact of exhaustion.

The fact of exhaustion should mean that energy has been extracted *from* a source of energy so that none has been left We can imagine a head of water in a mill dam which has been emptied or an electric battery which has been totally run down The energy from both is exhausted Or we can imagine a banking account which has been cleared out Now we would not apply the term exhaustion if there were water in the dam, or electromotive force in the battery, or money in the bank and if our failure to be able to get it were due to the fact that we could not move the sluice, or find the electric switch or lay

our hands on our cheque book We shall not get the energy till we use these means for releasing it and we shall be as destitute of energy till we find and use these pieces of apparatus as if there were exhaustion The view which is being put forward here is that when the term nervous exhaustion is used the condition is invariably one where the energy of the body is not run down or absent in any way but that something is preventing the patient from using available energy which is present It is of course understood that all toxic states such as mild infection thyroid intoxication and so on have been excluded It is so-called *nervous exhaustion* only that is being dealt with A regiment is on the march on a hot day and the men are dropping out from so-called exhaustion By far the best means to stop this and prevent lagging is to get the band to strike up lively music This cannot supply energy but it distracts the men from their boring task and energy is released i e the emotional reaction to boredom was fatigue The retreat from Mons was an experiment in exhaustion The British Army marched and fought with almost no sleep for a week This in itself postulates a much larger quantity of energy resident in the human body than is usually considered likely At the end of the week that army lay down and slept and it slept for about thirty six hours then it arose and rapidly pushed its way to the Aisne taking the battle of the Marne in its stride There are two things to note here (1) the recovery was rapid so unlike that of the patient with nervous exhaustion where weeks of rest leave him as tired as ever (2) the exhaustion did not become imperatively operative until the army was covered and could afford to rest that is when it had got covered by another friendly army Had it not so been covered it would certainly have struggled on longer as did that other army last century in the retreat from Moscow Many of course fell out but the majority showed that total exhaustion is largely a mental affair it does not arise so long as there is good reason why it should not

In those patients where exhaustion is complained of and where there is no organic disease exhaustion continues because the patient fears to exert himself If he does much he fears he will become still worse and therefore every effort he makes is made in fear and this fear brings on the sensation of exhaustion very soon That of course did not start the fear It began as a reaction to some doubt a fear or anxiety but usually it was carried on because it became dreaded and very often it will be found that some adviser sometimes a too anxious mother or wife or husband too often some doctor has been constantly saying to the patient that he must not overdo things in case he makes himself worse Sometimes there is a benefit to be gained by being tired I have often seen that it has been exploited to get people away from some disagreeable environment into the sanctuary of a nursing home At least once I have seen it in a man whose muscles were like iron who was engaged in a lawsuit for compensation after an accident

As this symptom is so common and of such great importance, it will be best to describe an example A schoolteacher of forty had been exhausted for four years so that she had been bedridden most of that time From time to time she had made rather ineffectual attempts to get about, and when first seen she was trying to get over one of these efforts She had been getting up walking and sitting in the garden, and as she was coming into the house one day carrying a deck chair she met her doctor, who asked her whether she thought it wise to be carrying that chair, that surely she might get some one else to do that In a very short time she felt exceedingly tired and went back to bed where I saw her a week later I took her history and heard that she had had a disappointment in love just before she fell ill there was also a drunken old father who disgraced her often before her friends She had felt tired and had been told constantly that there was no remedy for that except rest About my third visit I told her that I disagreed with the views about rest which had been put before her, and which she had accepted I told her what my beliefs were in the matter I did not give any advice about what she should do I scouted the idea that carrying a light deck chair could have brought on an exhaustion lasting for several days Next day she told me that I had given her an extremely bad night, and that in consequence she felt much worse, and that if she were going to be upset and not sleep things would soon become worse I then told her that my views about sleep were parallel to my views about exhaustion that she was feeling worse because she was already convinced that poor sleep was a very dangerous thing I retracted nothing of what I had said about exhaustion The night after that she slept well, and next day proposed to get up which she did, and in two or three weeks she was walking about and taking exercise with no complaint of fatigue at all How was this accomplished? Simply by altering her views about exhaustion so that she no longer paid any attention to feeling tired because she now believed it did not matter and because she knew that she had not exhausted any reservoir of energy but only had been afraid to turn the tap on Her home difficulties were discussed and she herself soon saw that even the drunken father must not be shirked

Connected with this question of exhaustion is that of overwork as a cause of neurosis Nothing is commoner than the history of overwork, given frequently by the patient but also quite often by the relatives In the vast majority of instances it will be found that there was a great deal of anxiety at the same period as that of the alleged overwork The student may break down on the eve of examination and overwork gets the credit, but surely there has been at the same time an obvious anxiety Or the student breaks down after the examination but not the student who has passed The business man who breaks down from overwork usually has had much anxiety at the same

time and often enough that anxiety has had nothing to do with business but is due to something in his private life which has either been repressed into the unconscious or which is of such a nature that he cannot speak of it Long ago the writer knew a doctor who was obviously out of health and overworked At a casual meeting he volunteered the statement that he had strained himself physically by starting up a motor car with whose mechanism he was not quite familiar and he added that that was a very foolish thing to do A week later he ran off half heartedly with another man s wife and then tried to come home again I thought then as I do now that neither his overwork nor his strain had had much to do with his obviously neurotic symptoms I do not wish to say that overwork has no effect but it is often exaggerated as a fact

Differential Diagnosis of the Anxiety State

This has to be made in two directions (1) from physically determined disease (2) from the psychoses It will be convenient first to take the diag nosis from physically determined illness The difficulty is a double one There are physical diseases which yield no physical signs for some time to come One of these was described on page 5 6 under the heading of malingering Again a young woman had a sudden onset of insomnia which lasted a week and which was regarded as functional Some months later however she developed Parkinsonism which of course dispelled that idea On the other hand diseases may be present which are not causative of the symptoms in the case in hand Finally some of the symptoms may be due to physical and some to mental causes

The means of making this diagnosis are again two (1) history taking and (2) physical examination As this century has progressed physical examination has advanced by leaps and bounds The old methods of purely clinical exam ination have not changed much but the ancillary methods have done so enormously So much is this true and so accurate have the modern methods become that the number of morbid conditions which can be determined is enormously increased one need only mention things like apical tooth abscess the various blood infections early pulmonary conditions to make this plain It might be surmised that the diagnosis between physically and mentally determined disease would have become facilitated Paradoxically the opposite is true The ability to recognize certain morbid states is not always helpful A morbid state which is present may not be causing the symptoms of which the patient complains and yet the undoubted presence of a physical morbid state is a perpetual suggestion that that state is the cause of the symptoms In most instances a cholecystitis is not the cause of a phobia and its treatment by surgery will not remove the phobia And yet from time to time it will be

found that an operation of the kind will be followed by the disappearance of nervous symptoms There are two possible explanations of this, (1) that it was really a toxæmia which the operation has cured, (2) that the effect of hope had been the essential fact, for hope will, at least temporarily, make any patient much better

With modern methods there are very few patients who will not be found to have some physical morbid condition somewhere It might be said, why not deal with whatever morbid physical state is present, but in truth after a woman has had all her teeth out, her tonsils out, her appendix out, her gall bladder out and is still no better, she has usually become an incurable person and therefore one cannot just say ' deal with any morbid state" All these organs may have been unhealthy, but that does not prove that her neurosis may have had anything to do with them The neurosis may have depended on something quite different such as that she had fallen in love with a married man and was troubled about it Therefore, as regards physical signs we must be constantly exercising common sense and asking ourselves the question whether the morbid conditions which the signs represent, could in fact cause these symptoms In many respects this is the most important question of all when it comes to evaluating physical signs

A middle aged woman was seen by the writer fourteen years ago, she complained of dyspnœa and palpitation of such severity that she could hardly walk across the room She had an enlarged heart, and there was present a loud blowing systolic murmur of the kind found in mitral incompetence She had been warned against over exertion by a cardiologist Common sense said that, if she was as bad as all that because of her heart, she should have some other physical signs, some disturbance of the pulse when she was not agitated some œdema somewhere, perhaps some albuminuria She had, however, none of these things and it was felt that she had taken the specialist s advice too seriously A fuller explanation was given, and she has enjoyed quite good health ever since Common sense and the evaluation of morbid signs is even more necessary now than it used to be

But nowhere is common sense more necessary than in the interpretation of a history, and it is in the history that we shall find the real diagnostic marks of neurosis The ability to take a neurotic patient's history is perhaps the most important thing in the treatment of his case I have heard a doctor say with pride that he had got all the essential history from a certain woman in a quarter of an hour, that she had tried to wander from the point, but he had kept her to it and very soon he had got all the facts and had avoided all the irrelevancies This is an excellent example exactly of how the thing ought not to be done The nervous patient must not only be allowed but encouraged to give his history in an irrelevant way He may be asked to tell all about him

elf to tell about his illnesses and his life generally about his childhood his school and his career and to do it quite irregularly diverging into side paths if he wants to The doctor may find it difficult to follow sometimes but it is the only way to get a history worth anything and it is the doctor's business to show mental agility and to be able to follow the patient in his story When a patient is allowed to tell his history at random all sorts of things will come out It may come out that as a child he was often delayed from returning to school by symptoms which came on invariably at the end of the holidays and it may come out that at various times illnesses arrived at extremely convenient seasons He may call them inconvenient for they may have prevented him going up for some examination but to the listener it will often seem as if they had served a purpose It may come out that his view of his childhood is that the rest of the family bullied him and his mother treated all the others better It may come out that he considered that he ought to be constantly advising and managing the others and how little they appreciated his efforts It will almost certainly come out that he has had to take great care of his health and that there were a number of sanitary rules which had to be followed or disaster would ensue and the rules were always difficult Thus he would be ill unless his bowels were moved every day but all aperients upset him and yet unless he took them he got no action except during a number of years when a raw apple the first thing in the morning kept him right but after a time that failed too and now he was in great difficulty about it In the history he may give a date when the present illness began but as he goes on talking it will become evident that he had many previous illnesses some of which did not seem to fit exactly into the nosological categories of physically determined diseases It will also be commonly evident that he had his illnesses too long for them to have existed and still show no signs and he will have had too many illnesses without signs

This sort of history will of course never be obtained by the doctor who has not the patience to listen to his patient Some doctors feel that they have no time to listen to patients of this kind but every doctor in private practice has a very large number of these patients on his books and they take up a large part of his time anyway A good deal of this time is taken up by gossip It would not take any more time to get history The history need not be indeed usually cannot be taken at one sitting it can be taken in sections Two or three sittings of an hour each would suffice for most Occasionally it takes much longer I have even taken about forty hours for one history but that is exceptional As we shall see presently this history so essential for true diagnosis is also the main instrument of treatment When one has taken this kind of history one soon acquires the art of deciding what is important and relevant in the physical findings To this we shall return again when we discuss treatment.

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	proach to consider himself sinful His failure is his own fault God may be punishing him	no chances How could he have succeeded when everything has been against him?
6	The patient gets well obviously spontaneously He has been unresponsive to all therapeutic efforts and the doctor is never given the impression that he has done anything	The patient gets better in direct accordance with his adoption of a fresh mental attitude towards his illness and life generally There is nothing spontaneous about the recovery Even in seemingly spontaneous recoveries a good reason for getting better can always be found
7	In the history there may have been previous attacks In the intervals the health was always good often too good i e manic or hypomanic	If there were previous attacks the patient was never quite well or never acknowledges that he was in the intervals
8	Is sure he is not ill only being punished	Is certain he is very ill indeed

It is important to note that these differences can be found with all degrees of the two illnesses that the psychotic will show all these characteristics even if he is well enough to be at work and then suddenly the picture changes and he is well For further discussion of manic-depressive psychosis see Vol VII Chapt IX

The diagnosis between the neurotic and the mild schizophrenic may be more difficult For a long time the two conditions may resemble each other closely One of the ways in which this diagnosis is especially difficult is because the schizophrenic like the anxiety neurotic often has been ill one way or another for years during which period he has passed as the neurotic has for being not a very strong person If the history is taken in the way suggested certain differences may come out Apathy is common in the psychotic but not in the neurotic When the schizophrenic person is anxious it is frequently about something which is impossible to normal thinking such as that the bones of the pelvis are shrinking or that a wild animal is loose in the garden every night or that certain things such as certain normal noises in the house are arranged in order to test him With this kind of history taking frank delusions and hallucinations often will be told of which will remove any element of doubt from the diagnosis It must be emphasized however that it may be weeks before the patient *so to speak gives himself away*

A young woman of twenty five was sent to me because she was exhausted The explanations about exhaustion which were given did not interest her (apathy) She was listened to but did not have a great deal to say till one day she said she wished to speak to me about something important viz that

One of the things which will emerge during the history taking is the patient's attitude towards his illness The subject of organic disease is not so interested in his illness He depreciates it, he has to be dragged to the doctor, and he tends to disregard the advice given The neurotic is quite different He willingly sees many doctors and always the best He is desperately interested in his illness and sees to it that his doctor understands how important it is

The diagnosis from psychosis may be easy or difficult There are some who deny that the difference between the two states is other than quantitative They seem to teach that a neurosis is only a mild psychosis That is not the view which is put forward here There are many psychotic patients who are not very ill, who are walking about and conducting their businesses, there are some people who are so ill with neurosis that they may die from it Generally speaking it might be said that the difficulty is that of diagnosing a sane from an insane state We cannot easily by definition state the difference, but every doctor is expected to make the distinction and is held by the law to be an authority on the matter Roughly it might be said that for the insane, phantasy and reality have become mixed up, and the patient has not that certainty about them, which allows the rest of us to distinguish sharply between our dreams — either day or sleeping dreams — and our real life The most important differentiations to be made are from a manic depressive psychosis and from schizophrenic attacks

The manic depressive psychosis resembles certain kinds of neurosis in the depressed phase The differences between the two are usually clearly marked It will be convenient to give these differences in tabular form —

	Manic Depressive Psychosis	*Neurosis*
1	Depression constant while the attack is on, not relieved by conversation or attempts to distract Cannot be made to laugh This is true even if the attack is so mild that the patient can continue at his work	Depression lifts many times a day The doctor usually can abolish it temporarily by talk Patient can appreciate a joke This is true even if the patient feels very ill
2	Does not weep	Weeps more easily than normally
3	Disinterested in everything including his own state Not anxious Does not read Just moons around	Anxiously interested in (a) self (b) his relatives and dependants May or may not be interested in books etc
4	Cannot appreciate beauty Sees it is present but cannot feel it	Can appreciate beauty as much as ever
5	Tends to remorse and self re	No such tendency Thinks he has

Every treatment which is not openly psycho therapeutical depends on getting confidence in a method a drug or another person In time these may all fail because of the events which have been already studied on pages 581–3 The confidence which is desired is the confidence which every human being should have in himself and without which life tends to be rather an unhappy affair To gain confidence in oneself one must understand what one s difficulties really are and it is quite certain that these patients do not understand what their difficulties are This is partly because they have acquired terrifying views about health and the difficulties of getting and keeping it They imagine that health is a precarious thing needing much care for its preservation that it is a tight rope off which one may fall easily instead of holding the proper view that it is a broad highway Certain it is that he who is constantly thinking about the rules of health will soon be a very sick man — he that saveth his life will lose it Those people also do not have confidence because most of them have repressed more material into their unconscious than the majority of us Obviously if one habitually represses most unpleasant things into the unconscious one has not had enough courage to face up to them

From all that has been said and the instances which have been given it must be clear that certain depressing ideas may still have an influence although they do not appear in consciousness These ideas form part of the unconscious mind and it is frequently desirable that they should be restored to consciousness so that they may be judged afresh It may turn out that they are not matters of which we need be ashamed at all and even if they should be we shall manage ourselves better if we face up to them and get accustomed to them The emergence of these memories into consciousness will be greatly facilitated if the patient feels quite sure that the doctor is going to be sympathetic and not going to scold or mock Therefore in this matter of history taking the first interview is the most important If it is a failure it is not likely that the damage which will have been done will be repaired It may by some be thought derogatory to be sympathetic to the patient but there is no sugge tion that the doctor is advised to be sentimental at this first or any interview What he has to do is to give the patient every encouragement to put his case before him

This interview must be one where no other person is present The patient and doctor must be alone No one is going to tell even the complete tale of the symptoms in the presence of a third person All patients have been laughed at or had impatience shown about their symptoms too often for them to repeat them in the presence of a relative and certainly no one is going to tell of his private anxieties unless he is alone with the person to whom he wishes to tell them he will not tell them to anyone unle s he is sure that that person will keep them to himself

she was five months pregnant She had then been under care for about three months and the nurse informed me that her periods had been perfectly regular indeed she was having a period at the very time she told me of her pregnancy It was pointed out that in these circumstances she was probably in error, but she replied quite quietly that she was right, and that in fact her lover visited her every night As she was in a hospital with night nurses, this was clearly impossible Her subsequent history confirmed the diagnosis of schizophrenia For further discussion of schizophrenia see Vol VII, Chapt VII

Hypochondria in the sane male is to be diagnosed by the fact that the patient fixes on one part of his body, say the throat, and is troubled with that for months The symptoms then shift to some other part of the body If he likes his doctor the latter will always do him some good, but never cure him Insane hypochondria is characterized by obvious delusions about health

In women there is a state, well described by Robert Hutchison under the title chronic abdomen" These patients suffer from abdominal discomfort and undergo innumerable operations Each operation benefits for a time, and then the patient relapses I believe that these conditions are psychogenic, but I do not think they are curable They seem to be more of the nature of psychosis than neurosis

Treatment of the Anxiety State

The doctor who wishes to be successful must not be in a hurry It is of no use whatever to see these patients for ten minutes or a quarter of an hour When a doctor believes he is in the presence of a patient suffering from neurosis he should tell him that he must make a special appointment so as to get to the bottom of things

The first interview should last for an hour At the moment the writer has more leisure than he had, and he has found that the optimum time for this first interview is an hour and a half After that most patients are unwilling to go on But in his busy days he never gave more than an hour for the first interview

As has been already stated, many doctors will say that the cannot afford that amount of time, but as a matter of fact to cure a neurotic patient in one's practice will save much time in the end for these patients take up a great deal of time in an ordinary practice with their repeated demands, and what is more important they cause a great deal of worry and bother to the doctor worry which leads nowhere So that the doctor merely in his own interests would do well to arrange to be able to listen at least once to what they have to say The object of treatment is to restore confidence, confidence in what?

degenerating or even tired that it is not an indication for resting his brain It is a sign that he has been so preoccupied about something either about some external anxiety that he has or with anxieties about his health that he has failed to pay attention to the business in hand and therefore he has not remembered For there is no memory where there was no attention Similarly he can be reasoned with about insanity and insomnia

This history *should be gone on with till the patient has no more to tell* In most instances this will be after three or four interviews It may even be less On the other hand it may be much longer

A point of importance in technique at this stage is whether the doctor should take notes or not I think for the first interview he may do so but presently he will be compelled to drop doing so in the presence of the patient He will find that the patient will begin to say something and then stop and if he asks why he will probably be told that the patient does not wish that thing to be written down and it will avail nothing that the doctor should assure the patient that his notes are quite secret that may or may not be true but in any event it is more comfortable to know that certain facts about oneself are not written down *The doctor may say that it is better that he should* have notes so that he can study them at leisure and he may prove to the hilt that he keeps them all locked up *And* the patient apparently may agree *readily and cheerfully Nevertheless a grave fault in technique has been* committed The flow from the unconscious to the conscious will have been interfered with the forgotten memories will no longer be recalled and what we wish to do is to stimulate their flow The doctor if he wants notes can always make a resume of the interview afterwards but what is rather curiously interesting about this kind of work is the ease with which these stories are remembered Everybody finds this

When the whole story has been gone through the question of physical *examination comes up A doctor in practice should examine his patient thoroughly* once for all *if he* is going to do it at all There must be no re-examinations in a week or two if the diagnosis is going to be made now *It* is probable that the findings are going to be negative but it will never do to remember in a week that one had omitted to examine the spine and then examine it If in a week s time it occurred to one that this should have been done then the opinion that there was no disease anywhere which was given at the first examination clearly was not justified Repeated examinations will not be interpreted as meaning that the doctor is a careful person but only as meaning that he is not sure of his diagnosis And in this matter of diagnosis unsureness spells failure Personally I seldom examine a patient but that is because I seldom nowadays see any patient who has not already been thoroughly examined clinically by people who are far more capable diagnosticians than I am

The doctor has then let the patient know that he is going to give him time and he may begin by asking him what he feels is wrong Usually there will be a description of many symptoms The patient too may diverge into history and go back and forwards from history to symptoms This is apt at first to be confusing but it is much best to let the patient tell his story in his own way, as has already been indicated A neater set of symptoms may be got by making him keep to the point and a neater history by making him begin at the beginning, but it will be sterile If he is allowed to talk in his own way all sorts of things will be said which would not be said if the patient were kept to regularity, all sorts of things which had been forgotten i e things in the unconscious, will begin to come into consciousness After some time the patient s flow will begin to dry up, and then one may ask about certain region of the body which he had not mentioned and to fill in the years in the history which he had left out He will probably, have gone back to early years but may have left out school or the circumstances of his marriage, etc When he has said his say, these should be asked about

Should questions be put about the sexual functions? They are very important and sometimes unless they are asked about, the patient may be too shy to start them Yet they may be the cause of much shame and worry which the doctor may be able to put right once he knows of them On the other hand I have had a woman say to me that she could tell me everything easily because I had not asked her any sexual question, a thing which other doctors had done and which had shut her up There is no need to ask them the first day if the patient says nothing about these functions by the third or fourth interview, then I believe it is better to ask One can ask too soon but also too late If the case has gone on a long time it becomes awkward to ask

So far as possible a biography of the patient s life should be obtained so that when it is finished the doctor has a fair knowledge of his patient s character, what sort of people he came from how he got on with his parents his brothers and sisters, with his school fellows and teachers The doctor should be able to make an estimate of his intellectual abilities, of his religious views of his social usefulness or otherwise This is best got by the doctor saying after the patient has finished his spontaneous story Thank you You have given me very useful information, but I want more I want really to hear your life story Can you begin at the beginning and go on? He will begin at the beginning but will often diverge into seemingly irregular reminiscences which will be of great value

During this time the doctor will not say much he must never criticize at this stage or all that will happen will be that the patient will close up and say nothing more of importance He may, however, encourage He may tell the patient for example that his poorness of memory is not a sign that his brain is

methods few will escape being shown to have some disease if the examination is *complete enough but for the most part these diseases are not productive of* symptoms not even though their treatment seems to lead to cure We studied the effects on health which were obtained by certain ophthalmologists treating an astigmatism which must be called normal because universal in such low degree These patients were cured though perhaps for a short time only because these specialists were enthusiasts who did not sit on fences who took great pains with their patients and who said in effect As soon as your eyes are normal and I can make them so you will be well They gave strong hope in the place of doubt and despair Why not cure everyone this way? Because as we shall see *these cures probably are not so lasting as those produced by* the method we are now studying

If there is effective disease which is producing part of the symptoms this must be acknowledged but it must be explained that it is producing only part of the symptoms and that most of them are due to mental states

Let us now take up the case of the person with whom nothing is wrong physically and who has been told so He has been told that before and it gives him no comfort to hear it again If there were something wrong he will say there would be some hope of getting it put right Therefore the doctor *must at once inform him that he knows he really has all these symptoms and* that they are going to be got rid of I hold very strongly that this should be said It is true many doctors are afraid to say it and think it savours of quackery It does that is indeed the whole of the quack s stock in trade He has nothing else whatever and in his hands it often succeeds We orthodox do not like it because we often find patients who have lost valuable time — as in cancer glaucoma and so on — by believing the promise of a quack that they would get well But it is a good therapeutic weapon all the same and the fact that it has been used where it should not have been is no reason for not *using it where it should We are using it only after careful history taking* and careful clinical examination

Having said this the next step is to tell the patient that his illness is due to a mental and not a physical cause This statement is also to be made quite plainly some people would use a periphrasis some would use the word psychological The object however is to make it quite plain to the patient what one s meaning is and therefore plain words must be used So plain a word as mental however needs instant definition The two errors into which the patient falls are to think either that one means that he is mad or that one means that he is *imagining his symptoms He has been dreading both these* things and more than one person has for certain already hinted at both diagnoses He must therefore be informed categorically that mental is merely the adjective of mind and that his is a normal mind that normal minds may

and also by laboratory methods But I am careful to tell the patient why I omit this part of a doctor's business All these diagnosticians have agreed that there is no physical disease, and therefore, we can proceed to the next stage of finding out why a person without physical disease is ill

In general practice, however, this will not always be possible, and as the doctor wishes presently to speak with authority, he must be complete and thorough in this matter Now it is obvious that however complete a physical clinical examination is, it may leave the doctor in doubt There are possibly some laboratory examinations called for The diagnosis is of course withheld till this is done The patient has waited for years anyway to get this investigation into his life, and he can easily wait a few days more Even then there are still doctors who are in doubt At this stage I do not think that there should be much difficulty in deciding whether the symptoms presented by the patient are or are not correlated to any physical findings There are people who never come to any decision unless the proof is absolute There are, however, no absolute proofs of anything in the world except perhaps in the region of plane geometry, and there the proofs are complete only because the subject has no real but only a conceptual existence In real life there is never absolute proof and at this stage the doctor ought to have in his possession enough information to create overwhelming probabilities one way or the other But he must not call them that, he must call them certainties Doctors, who sit on the fence, who are always guarding themselves against somebody saying later that they made a mistake, are great creators and confirmers of neurosis One of the things that every doctor must be on guard against is guarding his own reputation Let it take care of itself One of the great sins is that the doctor will with nods and innuendoes let it be inferred that though there is no actual disease in some organ, it is weak The doctor will then in any event be right for he has played the old game of heads I win, tails you lose If the patient gets well he always said the organ was healthy, if the patient is later found to be diseased well, he always said that organ was weak If, however, we are dealing with a nervous patient, the effect of this sitting on the fence is disastrous The doctor has suggested that the organ is weak, and that means of course that it is very bad indeed for the doctor is a kind man and wishes to let one down very gently and not discourage one too much He obviously thinks gravely of the case and therefore, care must be taken and all the old businesses go on as before

It is now clear then that a diagnosis must be given and that it must be yea or nay If the patient is physically healthy he must be told so quite plainly if there is disease he must be told so in simple language which he can understand and the value of that disease in the genesis of his symptoms must be estimated and the patient told what the estimate is As we have seen, by modern

methods few will escape being shown to have some disease if the examination is complete enough but for the most part these diseases are not productive of symptoms not even though their treatment seems to lead to cure We studied the effects on health which were obtained by certain ophthalmologists treating an astigmatism which must be called normal because universal in such low degree These patients were cured, though perhaps for a short time only, because these specialists were enthusiasts who did not sit on fences who took great pains with their patients and who said in effect As soon as your eyes are normal and I can make them so you will be well They gave strong hope in the place of doubt and despair Why not cure everyone this way? Because as we shall see these cures probably are not so lasting as those produced by the method we are now studying

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Let us now take up the case of the person with whom nothing is wrong physically and who has been told so He has been told that before and it gives him no comfort to hear it again If there were something wrong he will say there would be some hope of getting it put right Therefore the doctor must at once inform him that he knows he really has all the symptoms and that they are going to be got rid of I hold very strongly that this should be said It is true many doctors are afraid to say it and think it savours of quackery It does that is indeed the whole of the quack s stock in trade He has nothing else whatever and in his hands it often succeeds We orthodox do not like it because we often find patients who have lost valuable time — as in cancer glaucoma and so on — by believing the promise of a quack that they would get well But it is a good therapeutic weapon all the same and the fact that it has been used where it should not have been is no reason for not using it where it should We are using it only after careful history taking and careful clinical examination

Having said this the next step is to tell the patient that his illness is due to a mental and not a physical cause This statement is also to be made quite plainly some people would use a periphrasis some would use the word psychological The object however is to make it quite plain to the patient what one s meaning is and therefore plain words must be used So plain a word as mental however needs instant definition The two errors into which the patient falls are to think either that one means that he is mad or that one means that he is imagining his symptoms He has been dreading both these things and more than one person has for certain already hinted at both diagnoses He must therefore be informed categorically that mental is merely the adjective of mind and that his is a normal mind that normal minds may

and also by laboratory methods But I am careful to tell the patient why I omit this part of a doctor's business All these diagnosticians have agreed that *there is no physical disease, and therefore, we can proceed to the next stage* of finding out why a person without physical disease is ill

In general practice, however, this will not always be possible, and as the doctor wishes presently to speak with authority, he must be complete and thorough in this matter Now it is obvious that however complete a physical clinical examination is, it may leave the doctor in doubt There are possibly some laboratory examinations called for The diagnosis is of course withheld till this is done The patient has waited for years anyway to get this investigation into his life, and he can easily wait a few days more Even then there are still doctors who are in doubt At this stage I do not think that there should be much difficulty in deciding whether the symptoms presented by the patient are or are not correlated to any physical findings There are people who never come to any decision unless the proof is absolute There are, however, no absolute proofs of anything in the world except perhaps in the region of plane geometry, and there the proofs are complete only because the subject has no real but only a conceptual existence In real life there is never absolute proof, and at this stage the doctor ought to have in his possession enough information to create overwhelming probabilities one way or the other But he must not call them that, he must call them certainties Doctors, who sit on the fence, who are always guarding themselves against somebody saying later that they made a mistake, are great creators and confirmers of neurosis One of the things that every doctor must be on guard against is guarding his own reputation Let it take care of itself One of the great sins is that the doctor will with nods and innuendoes let it be inferred that, though there is no actual disease in some organ it is weak The doctor will then in any event be right for he has played the old game of heads I win, tails you lose If the patient gets well, he always said the organ was healthy if the patient is later found to be diseased, well he always said that organ was weak If, however we are dealing with a nervous patient, the effect of this sitting on the fence is disastrous The doctor has suggested that the organ is weak, and that means of course that it is very bad indeed, for the doctor is a kind man and wishes to let one down very gently and not discourage one too much He obviously thinks gravely of the case, and therefore, care must be taken and all the old businesses go on as before

It is now clear then that a diagnosis must be given and that it must be yea or nay If the patient is physically healthy, he must be told so quite plainly, if there is disease he must be told so in simple language which he can understand and the value of that disease in the genesis of his symptoms must be estimated and the patient told what the estimate is As we have seen, by modern

she was a manic-depressive of which illness however she showed no sign She was weeping and emotional evidently wishing to impress me with the seriousness of her condition full of the fact that at one time she had thought the illness her own fault but luckily some years ago she had found out that it was not She was very ready to tell her story In nearly every respect this is the opposite of the clinical picture of the manic-depressive

Her father lived in India she was brought up by her mother in England and heard frequently that her father was a bad man evidently he had been unfaithful to her mother When she was eighteen her mother became insane and attempted suicide and it was decreed that the girl was to go to India to her bad father She was afraid to go and had her first attack of nervous exhaustion After three or four weeks there she found her father however bad he might be a very pleasant person to live with moreover the ladies of the station were very kind and soon she became well After about eighteen months they came home and her father put her in lodgings with the object of her studying painting and then he went elsewhere to live He took no further notice of her again Very soon she relapsed After some weeks of feeling very exhausted she was asked to stay with some friends in the country and miraculously in three days she was well Up to this she had thought the thing her own fault but at the next attack she met a doctor who explained it was nervous exhaustion with the usual result that ever after she guarded carefully against nervous exhaustion This doctor gave a rest cure in which he emphasized greatly the importance of being fat After this she married very happily and was well for five years a much longer period than she had ever had Her husband was a widower with children and she and they seemed to get on very well Then came the war and two stepsons of whom she was very fond went to it She was anxious and of course had another attack of exhaustion which was cured this time by electricity And so on If histories are taken with care events quite as striking will be got quite commonly and soon after the explanation as has been said a decided change will be observed In the case just described the next time that I saw the patient she was much better She saw hope for the first time of not being constantly subjected to a series of illnesses for the rest of her life After a few days almost always there will be a very great improvement The bedridden exhausted person usually will get up of his own accord and proceed to do things He will feel a great accession of energy and say he has quite lost his fatigue The dyspeptic will eat any kind of food with pleasure and without subsequent discomfort and it would seem in many instances as if the case were over after the history has been interpreted

In some instances the patient may be worse and in some there is no change But let us consider first the patient who shows this early improvement In

hold mistaken views, and that mistaken views will cause symptoms He must be shown that the phrase "imaginary symptom" is nonsense and he may with advantage be told all that was written about imaginary symptoms on page 571 Immediately the patient is to be given examples of the emotional reaction of a motor kind (tears, palpitation, diarrhœa), and it is demonstrated how foolish it would be to talk of diarrhœa as imaginary when the person has perhaps soiled his clothes, and if these things are true, as they obviously are for the motor side, they cannot be false on the sensory

Besides at all times the literature has borne testimony that this is true ' Hope deferred maketh the heart sick " ' A merry heart doeth good like a medicine but a chastened spirit drieth the bones ' On the motor side such sayings are equally common "And when his father saw him afar off, his bowels were moved with compassion " That is perhaps a metaphor, but all metaphor rests on fact If it did not, it could never have started on its career The truth is that until the scientific age these were facts universally accepted Then someone announced that what was scientific must be capable of being weighed or measured, and then that, if knowledge did not come up to — or descend to — this level, it was not scientific knowledge, really not knowledge at all And so men began to forget, because they had become ashamed of knowledge about love hate, ambition and all the things that matter, and to say that these things could not possibly cause illness, if your adrenals were all right and could certainly have no place in medicine And to fill up this deficiency, systems like Christian Science arose to our confusion, for they cured many people

It may seem superfluous to say that this explanation should not be embarked on unless there is plenty of time For many people it comes as a quite new idea, and any quite new idea is often difficult to grasp It should never, therefore be tucked in at the end of an interview Furthermore the patient should be seen the next day He will probably have got it quite muddled up I have found it a good plan to ask him to write it out in his own words not as a task, but because I want to be quite sure that he has got it right

Very soon after this explanation has been given, and it has been shown to the patient that it fits his case, i e , that each attack of the illness, when it became worse, was due to some emotional strain, and that each recovery was accompanied by the instillation of hope for some reason or another, such as any new treatment or merely the happening of something pleasant, a marked change of some sort will commonly occur as in the following example

A woman of forty five complained of exhaustion and depression She had been ill for a year, but she had been subject to attacks like this since she was eighteen She had been told that she was liable to nervous exhaustion and that she must rest whenever an attack came on A doctor wrote to me that

remember this for the patient must be given the chance of doing so even if he has remained well after the first explanation and unless he is given the chance he may be too shy to seek it He may even get the feeling that after the doctor s kindness he now ought to keep well and be too ashamed to speak because he has not done so

Thus a woman of fifty had a phobia about birds of which she was absurdly frightened This was abolished After that she felt well for the phobia had led to exhaustion so she said which was her ostensible complaint when she was first seen After about a fortnight she told me that for years she had been greatly worried thinking herself a bad woman because during the war she had permitted her lover who was in fact killed in the war to be more familiar than she had thought to be consistent with virtue It was easy to get her to take a less distressing view It is important then no matter how much the patient has improved not to let the medical interviews degenerate into gossip

As an example of how things happen I may relate how this phobia about birds was discovered The patient did not in fact complain of that What she did complain of was nervous exhaustion and losing her temper One day she told me she had had a dreadful night because of owls in the garden I asked her if they had upset her because of the screech She looked very much surprised and said No the beating of the wings She said that was terrible but could give no reason We followed the idea back and she knew she had had it in childhood She then remembered that she had been shut in a barn in play by her brother and that suddenly a hen had fluttered about her head and that she had fainted This did not seem to me the beginning of the story Few people would faint at that and I felt she had fainted because she was already afraid of birds There was further a very vague recollection of being chased as a very little girl by a goose with outstretched wings It was not at all clear but she felt it had happened In fact however we were able to get this confirmed by her old nurse Here then was the fear of birds explained quite clearly An interesting thing was said by the patient a few days later She had always been a little afraid of going to Heaven This was now explained as being really fear of the angels wings here again we see repression at work The picture is a little ludicrous and therefore had to be kept repressed

After this very striking story she told me the conscious story of her own sense of unworthiness If one relieves anyone by mental means that is a proof that there is something in a talking cure and so patients are willing to talk further Her sense of unworthiness was mixed up with envy at other women with their husbands which sometimes worked up into hatred of them and the wish that their husbands might die And this was followed by further sense of

almost no case which I have observed for any length of time has this gone on uninterruptedly If a patient has had neurosis for a long time, and if he has no further use for neurosis he may continue well, but there will probably be one or two little relapses Fifteen years ago I treated a lady for so called nervous exhaustion by this method She became well very dramatically at once About a month later I found her one evening tired, white depressed She said she feared she had taken my explanations too literally and that she had in fact exhausted her reserves, that my view was too good to be true I asked her when the exhaustion had come on She said about three hours ago What was she doing? Nothing resting in fact This was the first time she had rested during the day since her recovery She was not resting because she was tired The fatigue came on while she was restin What had she been doing just before? Some friends had been visiting her and they had just gone She was then asked to go over what had happened at their visit They had walked in the garden and looked at the flowers At this point the patient laughed and said now she knew all about it As her friends were leaving one lady leant out of her car and said, 'You look white and thin I am afraid we've made you do too much You must take care you know' the old words which had been said to her so often all the e years and which she had always obeyed, the conditioned reflex of Pavlov However they had only to be put before the judgment seat of the intellect to be dispelled She had heard them, hated them, suddenly repressed them, and until she had recalled and judged them, they had been powerful One lesson is obvious the case is not finished with the first improvement however marked that may be and however little the patient now needs neurosis There will be odds and ends like this to clear up So much is this so that I should be anxious about any patient, who had no relapse during these first weeks When he has finished with the doctor and is standing on his own feet, he will meet with difficulties, it may be only in the shape of someone telling him to take more care but he will meet them and have an emotional reaction, for clearly nothing in this treatment can prevent the occurrence of an emotional reaction, but only their prolongation into illness Now if he has practised with the doctor how to deal with one or two reactions of the kind, he will be less liable, once he is without support to deal with the matter by repression and then be assailed with the thought that his illness has come back He will have learned that he must get to the bottom of these little attacks

A treatment of this simple kind will cure I believe the majority of patients and they will keep well for long periods The number of patients, who once had a need for neurosis but who do not have such a need now, is very great After their improvement it is probable that they will wish to tell of a number of other things which have been sources of anxiety to them It is important to

remember this for the patient must be given the chance of doing so even if he has remained well after the first explanation and unless he is given the chance he may be too shy to seek it He may even get the feeling that after the doctor s kindness he now ought to keep well and be too ashamed to speak because he has not done so

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sin for death wishes always seem sinful, and then she would think it was because of her sin with her lover that she was being punished in this way and then the feeling of how sinful this was, and so on These feelings had never been talked through with anyone, but after she had done this, their power to make her ill disappeared

Many patients will have several of these relapses, and it will be found that an explanation can be got for them, if care and trouble is taken Thus a young man who had syphilophobia, had connected this with being punished by God for the sin of masturbation, he knew quite well that he had no syphilis but the fear of it was his punishment He improved with reassurance that he had no syphilis, then he remembered that he had been told that his children would be insane if he married, and he had a bad relapse This was got over by further explanation Then it turned out that it was because his mother dominated him, and because she objected to his marrying, that he had acquired fear of syphilis For if he had syphilis he could not marry, and therefore could not offend his mother There was little doubt that the fear had originated in this way It is less humiliating to refrain from marriage, if you have an illness like syphilis — if you have acquired it innocently, and this was part of his belief — than not to marry because your mother may be angry This last conclusion was not remembered but was inferred justifiably I think by me He was aware that he was afraid of her, and that she disapproved violently of his marrying Therefore, the inference seems justified I have described this case fully in my book 'An Introduction to Analytical Psychotherapy'

In this way it will be seen that by ordinary history taking in a friendly atmosphere we have become aware that our suggestion of an unconscious mind is not an absurdity, but a necessity By an unconscious mind I mean that certain ideas which are not present in consciousness, and which seem incapable of ordinary recall do have effects The story of the goose had been wholly forgotten The thought in the young man that it was less humiliating therefore easier to believe you have a disease rather than to know you cannot face your mother's wrath, was never in consciousness, but when it had been faced up to and formulated clearly, he was able to agree that it must have been present and to ignore it and to marry

It will be seen that these stories from the unconscious were provided directly from the patient and were not the inventions of the doctor If one listens sympathetically, all sorts of things will be remembered It is necessary to emphasize this because in many circles it is more than hinted that what is found in the unconscious is invented by the doctor and foisted on to the patient Now take the case of the young man it was he who told me how tyrannical his mother was and when I sympathized, it was he who remembered that she had, four years before, actually put a stop to a love affair, so violently that subsequent

ones were carefully concealed He had forgotten so striking a fact but remembered it easily enough when treated kindly I could not have put it into his head that he had had such an affair I certainly did put it into his head that he was finding it less humiliating to avoid marriage because he feared a disease which had no existence than to own up that he avoided it because he was afraid of his mother I certainly provided an interpretation of the facts but the facts were given to me And this is what happens in every medical diagnosis A doctor finds a fact dulness on percussion and so on From the collection of facts he makes an interpretation i e a diagnosis Bad doctors sometimes invent their facts There are bad psychotherapists who do the same

We have here too an indication that an unconscious thought may be active and never have been in consciousness at all My mother will be very angry with me if I get engaged to be married is a thought which I believe to have been in the situation to have been dynamic but I rather think it had never been permitted to enter consciousness Consciousness uses language the *unconscious never uses plain straightforward language but often uses symptoms* to express its ideas Sometimes it uses pictures as in dreams I think however that the general practitioner should at first at any rate avoid dream interpretation

In the conduct of cases it is easy to observe how small difficulties are being constantly dealt with by repression A certain nervous man a bank manager of about forty five had a crop of boils which left him weak While on holiday after this he met a doctor who persuaded him so well that he needed a long rest that after eight months he was still resting though he was not very happy about it It seemed to me that though rest may have been indicated at one time there was now no such necessity I saw him on a Thursday and again the next day and explained about exhaustion and so forth I saw him again on the Monday and he said he was much better On the Friday he had felt quite well but on Saturday and Sunday he had a headache which still lingered He repeated that he was however much better but not so splendid as on the Friday Nothing whatever had worried him in the slightest degree This is almost always what patients say and believe He then went on to describe his week end His first assistant had called on Friday to say that he himself was going for a short holiday but that the next in seniority would take temporary charge The patient spent a good deal of Saturday wondering whether now that he felt better he ought not to go back whether the second assistant was up to the job whether it would insult that assistant if he himself did go back Now surely this is conflict and a perfectly feasible cause for headache Nay more as he could not settle the point some part of his mind was going to settle it for him by saying not in words but by symptoms Well you see you re not

well you've got a headache so you had better not go back" I call this repression, although the patient told the story easily It is repression, because even while telling it he wholly failed to see that it was a conflict It seemed to him indifferent

Soon patients will learn to see these things for themselves and not settle difficulties by repression and symptoms

An important question arises, arises indeed at the beginning of treatment but which can be more profitably discussed at this point of our argument Are these people to be treated in their own homes, in a nursing home or other clinic or by coming to the doctor s house? To each plan there are objections Although neurosis need not keep a patient in bed, some neurotics will be in bed before treatment has started and they must begin their treatment there It will probably be easier to get the proper atmosphere, if such a patient can be removed to a nursing home For weeks or months or even years the patient has believed and has made the family either believe or acquiesce in his belief that he is too ill to be up Almost certainly in a few days the patient will be quite willing to get up and will believe that it was a mistake to have stayed in bed But can he be expected to adopt the new view in the presence of relatives, who will perhaps be outraged that they have been deceived by the patient s humbug or who will tell him that they had always known that there was nothing the matter? It will be much easier to get this change of belief accomplished, if the relatives are eliminated, and therefore, they should neither visit nor communicate with the patient for a week or two

At the nursing home or clinic danger comes from the comments of the nurses They must be instructed that they are to make no remarks about the case They can tell the patient quite plainly that the doctor is prepared to answer all medical questions but has asked them not to do so Unless this is done, the nurses will certainly give opinions and if these hair splitting patients can find the slightest divergence in them from anything which the doctor has said they will make the most of it This point was first emphasised by Weir Mitchell, whose system was not wholly physical, though in a materialistic age it was misunderstood to be so It was a system of carefully thought out psychotherapy This is a point which must be emphasised Only one person can practice psychotherapy at one time on one person and the tendency for nurses to do it is great Nurses do not therefore much care for these patients They do not hear the stories they are not allowed to interfere with the treatment, and therefore, these patients are not popular with them In ordinary medical cases the nurse is expected to do something to help the patient outside of, though not in contradiction to, the doctor s plan Here her sole merit is to be passive A corollary will be to get the patient away from the nursing home as soon as possible

If the patient is not bedridden it will be better that the interviews should take place in the doctor s house than in the patient s own home It is undesirable that the end of the interview should be immediately followed by the relatives trying to find out just what has been talked about and the doctor will not find relatives as amenable to discipline as nurses it is therefore a good thing for a patient to have a walk or journey home before he meets these relatives Sometimes it is a good thing if the patient can live anywhere else than at home during the earlier period of treatment There can be no doubt that the relatives do constitute a difficulty in the way of the patient acquiring new ideas Such a person could be treated at a clinic where there were other patients with similar conditions undergoing psychotherapy The Cassel Hospital for Functional Nervous Disorders is such a one in England There patients not only have psychotherapy but they re learn the art of co-operation a thing many have lost They learn also that they are easily able to do much more than they thought and they learn that their illnesses are not very uncommon conditions There is one drawback to a place of this kind and that is that a few of the specially complaining kind may set the fashion of grumbling and that these same people may discuss their ailments too much There is however short of keeping people isolated in bed no method of preventing people from doing this and perhaps it is not done in an institution of this sort more than anywhere else

If a clinic is to be the milieu it should be one where there are no psychotic patients To live with psychotic patients would be a great strain on us normal people it is infinitely greater for neurotic people It is necessary to mention this as the matter frequently is neglected and neurotic and psychotic people are herded together to the disadvantage of the former even though the illness of the psychotic patients may be quite mild A patient with a serious psychosis is alarming one with a mild one is irritating and boring none of these are the qualities which provides good neighbours for a neurotic and by good I mean health giving

How long need we contemplate such a course of treatment lasting? It is understood that we are considering cases easily curable though they may have lasted a long time I think very many should be quite changed in a month or six weeks and a considerable number in less time But it is understood that this depends a good deal on the amount of intelligence and goodwill exhibited by both doctor and patient

If the patient does not respond to this kind of treatment fairly soon the case is perhaps one which will not be cured by this method but it should be some time before such a conclusion is arrived at For example take a woman of thirty with phobias of crowds and interiors of buildings and a sensation of

being strangled These symptoms had been present for eight years She was treated for four months and became apparently well She returned in six months, because the feeling of being strangled was worse, and she was asked to talk more freely She did this, and it came out that about the time she was eighteen years old her mother became an invalid, and the patient was not as patient and kind with her as she might have been People had said to her that she was not as attentive to her mother as she ought to be This had been succeeded by death wishes which had been repressed, but which had been fitly symbolized by the sensation of being strangled For many people a death wish is as wicked as committing murder, and though it was quite repressed and therefore unconscious, she did not escape the penalty of murder, which is strangulation by hanging

Now by simple persuasion she had lost her symptoms at the first visit but this improvement had been ephemeral After this complex emerged into consciousness and was fully weighed in consciousness, she became well and has remained so for seven years at least, that is, up to date

In the foregoing discussion of the anxiety reaction there has been only one mention of the name of Freud and the word psychoanalysis No disrespect for the greatness of Freud is intended Most of what has been said about the unconscious mind was learned by me because I have read some of Freud's books but the unconscious which I have described is not quite the same as the unconscious which Freud and his followers have described The important repressions according to them occurred within the first five years of life and are connected with things which, if they occurred in the adult, would be regarded as evidences of insanity, the œdipus complex, anal erotism urinary erotism and the like From time to time I have come across evidences of these complexes, and of course psychiatrists come across them often It is quite likely that they are really there it is quite likely that young children under five years old do live in this quite insane world, where the father is a mixture of God a cruel giant who will eat you up, or castrate you because you are in love with your mother who is his wife though at the same time he is a friendly person whom you admire All these things are probably true, but for the cure of the majority of patients with anxiety reactions I do not believe that analysis down to these levels is necessary My statistics on the point provide some proof of that At the Cassel hospital out of 1186 neurotic patients about 45 per cent were quite well and 25 per cent improved at the end of one year after discharge from the hospital, at the end of three years about 40 per cent had been lost sight of, 40 per cent were well and 10 per cent improved At the end of five years 40 per cent were lost 34 per cent were well and 6 per cent were improved It cannot be said that all

who were lost were necessarily failures That is not so because sometimes we got no answer to our enquiries for some years and the patient then wrote to say he had been well all the time Sometimes indeed patients have written to say they were well but wished not to be reminded of their illnesses Mary Luff and Marjorie Garrod of the Institute of Medical Psychology London where a not dissimilar form of treatment is adopted state that 65 per cent of patients out of 500 are much improved on discharge and 55 per cent have remained well after three years They note also that failure to reply for a year or two does not necessarily mean relapse

It is of course possible and even likely that some of those whom I have failed to cure would be cured by a psychoanalyst but even so it might be the person and not the method which was the important thing The analysts cure everybody no more than do other people Kessel and Hyman in an important paper showed that analysts cured about one third of the patients referred to them by themselves admittedly difficult cases

I have not attempted to describe the full Freudian doctrine for several reasons The method is wholly unsuited for general practitioners it goes on for months and often for years and the seances must be at least five days a week of not less than one hour each The technique is so difficult that no one who has not himself been analysed can learn it whereas the technique recommended here can be learned and practised by anyone who cares to take a little trouble By the method of psychoanalysis it is easy to make a patient worse In anxiety cases by the method here described it is not easy to do harm

If a doctor wishes to read something so as to understand the theory of psychoanalysis an article by Flugel in An Outline of Modern Knowledge is a good resume Hendrick s Facts and Theories of Psychoanalysis is also to be recommended But if anyone wishes to practise psychoanalysis he should put himself under the tutelage of an accredited analyst To have gone into the matter here would therefore have been only to waste space and it is best if the doctor wishes to read a short resume of the Freudian system that he should read one written by a professed Freudian Freudians would say and possibly with truth that what I wrote about Freud s doctrines would be distorted

This completes the scheme for the general treatment of these patients which can be carried out by any doctor who is sufficiently interested I believe that in most patients where it helps it is also a preventive of relapse If the patient who has been helped in this way becomes ill in future he will probably say to himself Is this really illness or am I trying to dodge some difficulty which I have already repressed? And if he does this he has a chance

of perceiving and dealing with his source of anxiety For in the end it is not anxiety, but failure to deal properly with anxiety which causes illness Note parenthetically but particularly that the patient does not in practice first consciously become anxious and then get a symptom It seems to him that he got his symptom first, because in fact he had already repressed his anxiety as in the case of the lady described on page 610 The patient treated and apparently cured by a drug or electricity or even by hypnotism has, on the other hand acquired no knowledge which will enable him by himself to treat relapse He must resort at once to the person who healed him before In many instances this is the thing he wants to do He wants to lean on his doctor at every turn and he will willingly find an excuse in these symptoms to go to him very soon The treatment here described has as one of its objects the acquisition of independence, so that patients shall not lean on their doctors as much as formerly

That is a danger inherent in the treatment of neurotic patients which is perhaps one of the reasons why doctors dislike them, that the patient gets too dependent on, too fond of, the doctor This may easily happen up to the point of the patient falling in love with the doctor This state which has been entered into very fully by the Freudians, and to which they have given the name *transference*, is not found only in neurotic people nor in the treatment of the sick It may occur wherever two human beings are thrown into contact The Freudians believe that it is an inevitable phase of treatment, if the patient is to be cured They believe, too, that it is the feeling or feelings which the patient originally owed to the parents or their substitutes when he was a child, hence the name transference These sentiments have been transferred to the doctor The relations of the child to the parent were never satisfactory They were a mixture of love and hate, gratitude and resentment, admiration and contempt and so on The child never got them straight Later in life he must work them off on someone if he is to get well, and the doctor is well fitted to receive the whole thing being poured on to him Sometimes the full transference cannot be avoided but it is not true that it is always essential for cure There must be friendship enough for the patient to trust the doctor at first he must be dependent But it is a misfortune in most instances, if the thing proceeds to love If it does the doctor must learn to recognize it and if it can be done without gaucherie, he had better tell the patient that he recognises the state of affairs He must however do so in a way that will not produce a flat denial He must be kind and sympathetic about it and explain how every patient who finds someone interested in the case, is apt to make that person into a god But it is a phase which will pass, and meantime independence is ever the goal to be kept in mind

Though the important treatment is general, and though the proper treat

ment of local symptoms is to evaluate them only it may be necessary to pay some attention at first to certain local symptoms

Insomnia should be treated from the first by pointing out from the history how it arose informing the patient that nothing serious will happen if it continues a little longer that patients do not go mad from it and so on It may, however be wise at the outset sometimes to give a hypnotic drug for a short time The patient may be too distracted to listen to explanation and to refuse to give a drug may be only to set up resistances But all such treatment should be only temporary and if the patient can listen to explanations it is better not to begin drugs

If however a drug must be given it should certainly be given in an effective dose Half a gram (7½ grains) of medinal or 0 15 gm (1½ grains) of nembutal will suit most patients One to one and a third grams (15 to 20 grains) of chloral may be better for others Each of the doses administered should be ordered by the doctor by this I mean he should not be other than most precise in his directions as to how often the drug is to be taken *It is better that a responsible relative or nurse should have charge of the supply than that the patient should have it.* With regard to stopping *once the patient has really lost all fears connected with insomnia he will drop it of his own accord* In actual practice I find most insomniacs are already taking a drug I give them my views about insomnia but no instructions I usually find that after a few days they have stopped the drug by themselves This is better than giving instructions as it provides a step towards the desired independence

Headache and other head discomforts are best treated without drugs and if the headaches are really mentally determined it may be necessary to be firm about this Many patients who suffer severely from headache have become addicts of the various headache powders and tablets on the market

Dyspepsia — Some physicians (Alvarez for one) who recognize that a given patient has a mentally determined dyspepsia nevertheless prescribe a diet which they believe to be easily digested I think such an attitude is wrong These doctors report that their diets succeed and I have no doubt that they do so for a time did the diets of their predecessors who held no psychological views but who thought that there was gastritis If we are to get away from mere personal influence we must I think teach these patients that one food in ordinary use in a household is just as good as another for their dyspepsias never depended on their stomachs or their diets but only on their minds *Observe it is the ordinary foods of a household that are commended here* Alvarez rightly condemns the roughage and other patent diets which have been so freely advocated *and whose success can only continue while the patient* believes in them But although he has shown that these foods are often phys

of perceiving and dealing with his source of anxiety For in the end it is not anxiety but failure to deal properly with anxiety which causes illness Note parenthetically but particularly that the patient does not in practice first consciously become anxious and then get a symptom It seems to him that he got his symptom first, because in fact he had already repressed his anxiety as in the case of the lady described on page 610 The patient treated and apparently cured by a drug or electricity or even by hypnotism has, on the other hand acquired no knowledge which will enable him by himself to treat relapse He must resort at once to the person who healed him before In many instances this is the thing he wants to do He wants to lean on his doctor at every turn and he will willingly find an excuse in these symptoms to go to him very soon The treatment here described has as one of its objects the acquisition of independence, so that patients shall not lean on their doctors as much as formerly

That is a danger inherent in the treatment of neurotic patients, which is perhaps one of the reasons why doctors dislike them, that the patient gets too dependent on too fond of, the doctor This may easily happen up to the point of the patient falling in love with the doctor This state which has been entered into very fully by the Freudians, and to which they have given the name *transference*, is not found only in neurotic people nor in the treatment of the sick It may occur wherever two human beings are thrown into contact The Freudians believe that it is an inevitable phase of treatment, if the patient is to be cured They believe, too, that it is the feeling or feelings which the patient originally owed to the parents or their substitutes when he was a child hence the name transference These sentiments have been transferred to the doctor The relations of the child to the parent were never satisfactory They were a mixture of love and hate, gratitude and resentment admiration and contempt and so on The child never got them straight Later in life he must work them off on someone, if he is to get well, and the doctor is well fitted to receive the whole thing being poured on to him Sometimes the full transference cannot be avoided, but it is not true that it is always essential for cure There must be friendship enough for the patient to trust the doctor, at first he must be dependent But it is a misfortune in most instances, if the thing proceeds to love If it does the doctor must learn to recognize it, and if it can be done without gaucherie, he had better tell the patient that he recognises the state of affairs He must, however, do so in a way that will not produce a flat denial He must be kind and sympathetic about it and explain how every patient who finds someone interested in the case, is apt to make that person into a god But it is a phase which will pass, and meantime independence is ever the goal to be kept in mind

Though the important treatment is general and though the proper treat

Now the size of the vagina for practical purposes cannot as a rule be ascertained The calibre depends wholly on the amount of muscle spasm or normal tone or relaxation Relaxed it will admit a large object Contracted it will hardly admit a little finger Its *complete relaxation for the purpose of admitting* the penis depends also on the amount of natural lubrication Except in periods of sexual desire it is normally dry in periods of excitement it is well lubricated When a woman is using one of these dilators in cold blood she is *in a mental state which is the opposite of sexual excitement and therefore she* is dry and contracted and therefore the glass dilator will hurt and more and more as she goes on will it get fixed in her mind that this is a nasty and painful business and the difficulties associated with connection may be increased *With explanation about relaxation or contraction of the vaginal wall* as much will be accomplished as could be by any glass rod, and discussion of the difficulties already enumerated will help many

The Hysterical Reaction

Typically the nervous anxiety in patients exhibiting this reaction has been converted into somatic symptoms so that the patient is not consciously anxious at all In this state the patient has given up the struggle That is all over and the patient has surrendered to the illness

My own experience of patients who exhibited this was mainly in paralysed soldiers They might be completely para or hemi plegic and confined to bed They slept well they were perfectly placid They could talk about the war in a way which the patient with anxiety symptoms could not They had one regret about it and that was the thought that here they were safe in a clean *comfortable bed while their dearest friends were toiling in the dirt and dangers* of the trenches To achieve this placidity of mind two essentials are necessary the symptoms must be of such magnitude that there can be no question about them keeping the patient out of the disagreeable environment and there must be in the patient's own *mind the absolute certainty that they represent physical* diseases like paralysis or contractures or epileptic fits Now the proof among the soldiers that this was true was easy to obtain Nothing in these days was simpler than to remove these functional paralyses It became the rule that they were to be cured at a single sitting by persuasion At first the patient was pleased with this result but in a couple of days he usually presented many anxiety symptoms of which insomnia would be the chief and his placidity had gone *His security had disappeared He was now eligible* to be returned to the hell of the war It may be asked if this was so why did anyone lose his paralysis no matter how persuasive the persuader Even if an individual patient could not foresee that it made him eligible for duty others

ically dangerous, there is no need for these patients to be given a specially bland diet. They can digest anything given ordinarily in a household.

Constipation.—If the patient has been induced to believe that constipation is not a very important matter, the interest in that symptom will disappear and so in many instances will the constipation. It is the fashion at the moment to inveigh against the use of habitual aperients, and that can be as neurotic a thing as their abuse. Because some people take too much and keep their bowel irritated, that is no reason why others should not take a small dose. Many, as has been said, will cease to be constipated when the unimportance of the subject is explained, but if they do not, a small dose of aperient daily never harmed anyone. It is important, if a day is missed, not to increase the dose, which upsets the rhythm of the bowel, but just to wait till it is right again. An interesting and valuable practical account of this subject is given in Walsh's Psychotherapy.

Though all local symptoms of neurosis where people are apt to take drugs, should be treated by the general methods already described and though this must always be the main intention, yet one need not be too pedantic about a drug. It will be better that these should be openly allowed, if they cannot be done without, for then they can be regulated than that the patient should take the matter entirely into his own hands. There are some local conditions which must be considered where drugs are not usually thought of.

Impotence in the male is common in early married life and in most of the patients it can be abolished by reassurance. There have been some difficulties because neither partner knew very well what he or she was doing and because of these difficulties the erection weakened, and the patient thought he was impotent and next time he failed because he dreaded that he would. If there is no organic disease strong reassurance will put most of these patients right at once. It is also well to impress on both partners that it does not matter in the least if the thing does not come off for a few nights, and that it will be best, if they did not try for say three nights, to give everything the chance of a fresh start. In most instances this will be followed by disregard of the instructions and complete success. If any history of a specially thick or tough hymen is forthcoming this should be attended to immediately, certainly before further attempt is made. Nothing annoys the average woman more than ineffectual attempts at penetration; nothing is more calculated to start frigidity in her or to increase any tendency to impotence in the male. Where the impotence does not yield to simple reassurance the various causes, already described on page 593 must be investigated, and then treatment may take a long time.

In the female the various reasons already described must be investigated. I cannot think that the use of glass dilators often given to women to "stretch" their vaginas can be good practice. It is alleged that their vaginas are small

same weight as regards uneducated people It is probably quite safe to remove their symptoms by persuasion and indeed in actual practice it may be the only thing to be done We shall return to this again

Not every hysteric however is free from anxiety or anxiety symptoms and this brings us back to the difficulty of classification For example a patient with severe hysterical choreiform movements had terror of darkness and such *fear of being in a house alone that when her friend with whom she lived in a* cottage went out she herself could not remain in the house but had to stay in the garden till the friend returned Even if it poured with rain she had to stay there

Why then should one call palpitation an anxiety symptom and a paralysed arm hysterical? There is a difference Everybody has palpitation sometimes it is only when it becomes excessive that it constitutes disease Everyone has a bad night occasionally it is only in excess that we call it insomnia And so with other symptoms like indigestion or constipation But the symptoms which are called hysterical are not found in healthy people Healthy people never have functional paralyses or contractures or fits or go dumb or have periods of massive amnesia Here we strike things which are new phenomena and much more abnormal than are ever found in anxiety states though they are still clearly emotional reactions

Symptoms of Hysteria

Mental Symptoms — *Amnesia* means loss of memory not losing incidents here and there as in normal people or anxiety reaction people but in definite blocks of time These incidents were common in the war but are found also in civil life During the amnesic state the patient may wander and the incident is then called a *fugue* I have seen a patient go off in a fugue She was a woman who had many hysterical symptoms and she was about to say something which would embarrass her very much She suddenly rose from her chair and left the room My thought was that she had been suddenly called to relieve her bladder After about five minutes I tried to find out what had happened but she was not in the house She returned about four hours later She said that she had no recollection of leaving me but only remembered that she had been having an interview There was then a blank period which she recognized as a blank and then she heard me calling her and found herself some miles away The last incident furnishes us with another hysterical symptom viz *hallucination* Such an hallucination differs from a psychotic hallucination because the patient knew at once that she had not in truth heard my voice but had only imagined it

Fugues and amnesias always are serious Usually the memories can be re

would tell him My own patients knew that I did not believe that a man who had had shell shock once would ever make a good soldier, and that I would do my best to get them out of the army, and therefore a number did get cured. But even apart from this they were strangely curable It was as if they were so sure of their safety, that they had forgotten that it depended on their paralysis

The characteristics of the symptoms which we may label hysteria then are that they are much more disabling than those we label anxiety, and that on the whole the patient has given up the struggle and has yielded to the disability From the point of view of character these will probably never make as good citizens as the others They are the quitters On the whole too they belong to a less intelligent and less educated section of the community So much is this true that we can make a class distinction here in the matter of diagnosis If an educated person has an hysterical paralysis, the case is fundamentally graver than if he belongs to the uneducated There has been a more serious breakup of his character, his normal reaction, if one may use such an expression, should be of the anxiety type So much is this true that I am chary nowadays of attempting to remove hysterical paralysis from anyone by direct persuasion, till I have found out in great detail why he has got such a paralysis at all For example a woman of forty suffered from hysterical paraplegia which was easily abolished by persuasion A few days later she became intensely depressed and made an attempt at suicide, which we believed was more than a demonstration On further investigation it turned out that she was deeply in love with her doctor at home, though he was unaware of this fact Her illness probably existed to ensure that he came to see her regularly It had started from another cause, but his failure to cure her almost certainly depended on this situation And yet like some of the soldiers she did not envisage, when she had been sent away from him and had come to us, that if she was cured of this, it might be difficult to arrange for his calling regularly The unconscious works stupidly She was cured easily by us that was the quickest way to get away from us and back to him But then, if she is cured he will not come Here is an endless conflict

Again a man with a hysterical fugue was investigated under hypnotism He came out of the hypnotic state before the doctor had learned everything, but not before he had learned that the patient had been swindling To cover crime with an illness especially with one of the loss of memory type, is common. It may distract the pursuers and in the worst event it is a possible defence that what was done was done in a state of unconsciousness that is in a state of irresponsibility This man may well have seen his defence being removed by a too enthusiastic doctor In a couple of days he attempted suicide by swallowing 100 grains of aspirin in solid form, which, however, did not kill but only produced a severe gastroenteritis I do not believe that these statements carry the

not come to bodily harm in the way an epileptic may by falling for instance into the fire The reflexes usually are normal but as this is a transient thing *in true epilepsy* the point is not one of much diagnostic importance On the other hand every patient with epileptic fits should be specially and carefully surveyed from the mental aspect Thus a young married woman had had fits since she was fifteen The first one came on at school during the day she had been scolded as she thought quite unjustly by the headmistress of her school When she came under observation she wished her husband to give up a certain job which made him live near her mother and take up another job which would remove them all some hundreds of miles from that lady The mother was a person from whom she considered that she had also received frequent injustice For a time the husband stood out and she had a fit about every six weeks during them she wet herself and bit her tongue I did not see one but another doctor did and told me that it was a true epileptic fit The fact that I never saw one is of course in favour of what is called true or idiopathic epilepsy The hysteric with manifest hysterical fits of what one may call the Charcot type usually lets the doctor see one After a couple of years the husband did what she wanted that is now about three years ago and she has had no fits since

Somatic Symptoms—Sensory — Anæsthesia of the skin is common It does not conform to anatomical patterns of either nerve or root distribution but corresponds to a patient s ideas Thus the whole hand may be anæsthetic but the anæsthesia may not spread above the wrist or the whole arm may be affected up to but not above the shoulder These examples obviously correspond to ideas of hand or arm and are physically impossible if such things must be given an anatomical basis A knowledge of nerve and nerve root distribution is essential if this is to be diagnosed It is characteristic that the patient does not burn himself in the way that is found in the organic anæsthesias like those of syringo-myelia or post anæsthetic sleep when so many are unfortunately burnt by hot bottles In the hysteric the fact that he is not burnt suggests strongly that he does in fact feel

It is a point of dispute whether this anæsthesia is ever spontaneous or is only created by the suggestive powers of a physician It is certain that the physician can increase it and fix it by taking interest in it The patient frequently will draw attention to it and should be informed that it is unimportant and will disappear in due course

Anæsthesia of the special senses may occur and give rise to blindness deafness anosmia loss of taste

The *blindness* may be so gross that the patient may have to grope about in the room but again he does not hurt himself or run into danger The diagnosis is made by the history and the absence of any disease that may cause blindness

trieved by putting the patient into a state of hypnosis, but in civilian cases I believe this to be an unwise procedure We may light on something which it may be dangerous to learn suddenly If you find that a man has swindled or committed bigamy or something of that sort and he has no time to adjust himself the consequences may be serious In the war cases it did not matter probably it emerged that the man had behaved in a cowardly way, but he could always be assured that everyone did that very often, no one can give such assurance to civilian criminals The slow emergence of memories by ordinary talking is much safer

Many fugues are artefacts When one is reported in the papers, there is usually a crop of them and though some of them are genuine, others are not

The common period for a fugue to last is from some hours to a few days The person is always under great stress

Double personality may be looked on as an extension of or a series of fugues I have not satisfied myself that I have ever seen an instance of this Those interested in the subject should consult the works of Morton Prince

Somnambulism —This is common in childhood and not uncommon as a regression in adults It is sometimes easy to recover the mental content of the "dream' which made the patient walk One can say that this is not a dangerous state I have seen many somnambulists and not come across one who came to harm though one alleged she went into a nearly boiling bath These patients are not asleep they are in a secondary state where they distort their surroundings, but are otherwise awake It is inadvisable to take much notice of the actual performance, which is apt to become a source of pride to the patient

Delirium sometimes occurs after emotional scenes

Trance may occur in similar circumstances If spoken to, the patient will not answer, but will usually lie immobile with the eyes open Both these conditions will be diagnosed from organic states by the history of hysteria in general and some special outburst recently, along with the absence of objective signs of disease

Hysterical Fits —These vary in intensity from outbursts of weeping and temper up to fits which may closely resemble epileptic fits Sometimes it has been said that they may be indistinguishable from the latter However true this may be, it is also true that the nearer the fits approach the epileptic in their appearance, the greater will be the difficulty of abolishing them by psychotherapy The typical hysterical fit is much longer than the typical idiopathic fit The movements are not the chaos of the epileptic but are often apparently purposeful and frequently exhibitionist they call attention They are much worse and greatly prolonged, if the patient is held down or struggled with The tongue is not bitten The patient does not wet himself He does

Here then was a person of the wrong age not a Huntington not a chorea gravidarum, of highly neurotic type, needing comfort and attention because of a disagreeable experience afraid of a machine she was expected to work, having seen an example of the disease she was unconsciously imitating We must say unconsciously for no one could consciously keep up choreiform movements for hours on end The diagnosis was easy The diagnosis generally is easy if one gets all the facts which usually are available if one sits down and permits the patient to tell them The real emphasis of this case lies in the fact that stories as rich in suggestion as this one can be got in most instances if only the patients are allowed to tell them

Dysphagia may be present The difficulty is to begin the act of swallowing, which differentiates the condition from the organic dysphagias of œsophageal origin where the act is well begun and things stick lower down It is not difficult to distinguish it from all the physical causes of dysphagia including cardiospasm by means of x ray examination Vomiting is common It may occur after every meal and yet the patient remains fat In all these the emotional origin can usually be discovered

Anorexia nervosa constitutes so remarkable a syndrome that it deserves a name to itself It is the neurosis which may threaten life itself It has numerous characteristics by which it should be recognized early and yet though common it is constantly being missed largely because the doctor s mind is filled with grave organic possibilities The patient is an adolescent girl or young woman She is unmarried She eats nothing to speak of and becomes thinner and thinner until she shows the most extreme degree of emaciation of which the human body is capable Few with cancer or tubercle become so thin The skin becomes dry crinkled and unelastic From the outset there is amenorrhœa Yet with all this she preserves her energy will take long walks and maintains that she is perfectly well She says that she has no desire for food but that she eats only as much as she wants to which is surely what everyone should do

Having diagnosed that there is no physical disease the doctor and the parents are prone to temporize but so long as they are not quite firm, the case will drift slowly on from bad to worse It must be insisted on that to try to treat these particular patients at home is always disastrous They will make as many promises as you like but will keep none Further I would say that the doctor under whom the case has developed is not the doctor who will cure that particular patient There is no great difficulty in getting these patients well and this doctor might easily cure another man s patient, but not his own for this patient has learned how to manage him and she will go on doing so If however these patients are put among kind but firm strangers who see that she does eat her food, and if at the same time she is not allowed visitors or

Sudden bilateral loss of vision is not very probable from organic cause The *visual fields* may be contracted and will become more and more so the longer they are examined

Deafness again may be absolute, so that the patient is undisturbed and does not flinch if a tray is hit with a poker just behind him The labyrinthine test is of value The hysteric reacts like the normal person

Intolerance of light and noise are also found in these patients and are often used as very potent weapons against all those who live in the same house

Mutism —In this the patient is dumb but can read and write perfectly, which distinguishes it from organic aphasia

Motor Symptoms —The common manifestations are paralyses contractures, tremor, choreiform movements The diagnosis rests on the history and on the absence of signs of any lesion In this department the diagnosis is easy because it is wholly neurological, whereas in the anxiety patients the physical part of the diagnosis may call for knowledge in all departments of clinical study In most instances the diagnosis of hysterical paralysis is not difficult Combinations, such as total flaccid monoplegia with complete anæsthesia and yet with preservation of the deep reflexes, are common On the other hand, the signs may call for extensive neurological knowledge Vasomotor symptoms in these paralysed limbs are common They are often blue and cold This disappears quickly on recovery

Contractures, if of long standing, may present a difficulty in diagnosis because of the presence of adhesions, and it seems true that structural alterations of some kind may take place if faulty positions are allowed to continue for years The common contractures are those of the hand being held in the accoucheur's position, the body being bent forward nearly at a right angle, shortening of one limb by means of pelvis tilting and talipes equino varus which may be bilateral.

Choreiform movements may closely resemble those of ordinary chorea The tongue usually is unaffected, but here, as in all the neuroses it will be by careful history taking and consideration of all the circumstances that an accurate diagnosis will be arrived at Thus a woman of thirty four had a history of chorea of two years' standing which is long for ordinary chorea She had worked on a farm and had had an accident with a tractor When she got over the results of the accident and was due to return to work, she developed the condition In the course of conversation it was discovered that she was afraid of the machine also that she had suffered from intense fear of the dark all her life, that she was a bad sleeper subject to frequent nightmares that just a little before the accident she had had some very unpleasant erotic experiences and finally that she had for the first and only time in her life seen a child with chorea about a month before her symptoms came on It was also manifest that her intelligence was normal, and that she was not pregnant.

It is of interest to note that we do not speak of traumatic psychoses although psychosis may only manifest itself after an accident. The reason may be that the difficulty of a psychotic patient starting an action at law is great. The medical profession is perhaps more to blame than the lawyers for the scandalous state of things which exists.

It has been stated that no patient with traumatic neurosis ever gets well until the monetary question has been settled and for practical purposes I think this is true. But it is not true in actual fact for I have with the most tremendous expenditure of time and energy got a few of these patients to see that their illness was kept up by anxiety about their health, spite against their employer and often for the purpose of teaching some doctor that he was wrong. It is never easy to get a patient to see all these things about himself and I should agree that it will always be cheaper for an insurance company to pay up than to pay adequate fees for doctors to cure these patients especially as we could not guarantee to cure them all. If we could and could thereby demonstrate that these neuroses are all the products of the folly of our laws it might be worth while. These patients are hardly ever malingerers. They all seem genuinely surprised rather than hostile when the view is put before them that a money motive is keeping them ill.

The symptoms may be of any kind but paralysis and weakness of muscles and headache are the commonest.

Treatment of the Hysterical Reaction

Much of this has been said already but must be repeated. Fundamentally the treatment of the hysteric should not differ from that of the patient with anxiety symptoms. In each state we have someone who cannot accommodate himself to this world as it is and the first step is to try to find out why. Formerly I advocated that the gross hysterical manifestation should be attacked and after that had been removed by suggestion or persuasion that one should go to a more careful analysis of what had brought on the disability. In dealing with large batches of patients as in the army such a procedure may be best. One had not time to investigate anyone very deeply. It was comparatively easy to remove gross hysterical symptoms such as paralysis or contracture, mutism or convulsions by showing the patient the emotional foundation and then using persuasion. In numbers of patients when this was done there was nothing left apparently in the way of symptoms. In many as has been already stated an anxiety state developed which frequently did not last long because in fact these patients were as a rule discharged from the army and they saw that to get well was an essential preliminary to get out into civilian life. But in civilian life if the removal of hysterical symptoms brings us face to face with some insoluble problem there is no relief possible as a rule which is

any communication with home for a few weeks — four to six — she will soon be fattened If she can communicate with home, she will paint such a picture of cruelty in her prison, that the kind of parent, who allowed such a condition of affairs to develop at all, will soon come to rescue her

Fattening, however, is not the whole business We must of course by the usual method of history taking find out something of why the patient went like this Often the patient was formerly well nourished and was laughed at called 'fatty" Often because of faulty sex education the patient was ashamed of her developing breasts, this by the way is a frequent cause of abnormal posture, bending forward of the whole body Sometimes appetite disappeared first because of some sorrow Often the mother is a large woman frequently of managing type, and the patient has resolved to be as unlike her as possible

In their management it is essential to begin with that the patient be watched at meals She will deceive everyone if she can but will accept a rather humiliating surveillance quite cheerfully If she has failed to gain at the weekly weighing she has scored There should be no difficulty in getting a gain of three or four pounds weekly Ordinary food should be given, not only because it will do what is wanted, but also because the patient must not be given the chance of saying that her constitution required anything special For the first few days she should be given very little, say 4 oz milk every two hours, the first day, adding 2 oz the next and a small portion of bread and butter and another 2 ounces of milk the next day If there are seven feeds a day, which is not difficult to manage, this will give nearly three pints of milk and several ounces of bread and butter the third day, which will probably be far more than she has been taking From this the rise to a full ordinary diet is easy She should take three to four pints of milk daily plus an ordinary diet till she has gained as much as is desired

It is important not to make her too fat but only reasonably well nourished There probably is great objection to fatness on the part of the patient and one has no right or desire to make anyone look absurd The faithfulness of the nurse in carrying out orders to the letter is of vital importance here She should not have ideas of her own but simply carry out orders Otherwise she will be entangled in endless disputes with the patient

Traumatic Neuroses — We cannot close the study of the semiology of hysteria without considering the traumatic neurosis It may be stated categorically that the expression is a contradiction in terms Trauma cannot conceivably cause neurosis And if parliaments and lawyers could get this simple notion into their heads there would be an end of these disorders Trauma is never followed by neurosis unless the subject hopes to make money out of it. Trauma may, of course, be associated with fright, but fright of the kind associated with an accident is not in fact the kind of fright which causes neurosis

Hypnotism will often cure these patients of their gross disability but hypnotism is not a good weapon It is not a method by which patients are made more self reliant, but rather the reverse The patients are apt to want it more and more It is very easy to hypnotize hysterical persons as a rule, in contradistinction to the sufferers from either anxiety states or the obsessional neurosis and hysterics will often ask for it But the number of times that I have regretted using it has on the whole been greater than the number of times I have felt it had done real good I had difficulty in abolishing the state of dependence on me which the procedure caused

There are certain symptoms which cannot be treated by persuasion such as fits and somnambulisms If these cannot be treated by the method of understanding the patient they may yield to discipline which must however be called treatment Thus in a war hospital at which I was a medical officer I said that these men could not go out of the hospital till they had had no fit for a month as it was not safe These men lived principally to go to garden parties and theatres At this hospital fits had become fashionable In about a fortnight they wholly disappeared

If symptoms are abolished by persuasion or discipline only they will probably soon be replaced by other symptoms or on the other hand the patient may tell what his anxieties are Frequently they exist because this person is not adequate to the ordinary strains of competitive life whether this be in the way of earning his living or because of social or other inferiority It may be that the environment would be almost impossible for anyone A drunken or brutal spouse tyrannical nearly insane parents all sorts of horrors may be revealed They may be exaggerated but often they are true We must keep in mind that the hysteric belongs to a poor mental class and that he will not respond to indefinite urging It is easy for him to break down again and therefore we may be compelled to see whether we cannot improve the conditions of his life This means that we have not wholly succeeded in curing the patient but it may be the wiser course In this connection the hysteric may try to put pressure on us by a scarcely veiled threat of suicide If we are sure that the patient is truly a hysteric we can safely ignore this and we must I think let him see that we are not amenable to pressure of this sort

On the whole then the treatment is the same as for the anxiety state but we shall not expect so good a final result The anxiety patient is on the whole anxious to be well and back at his work but he has got lost in a fog The hysteric is not so anxious to get back to work as to be made much of To remove gross manifestations is easy to alter the mental substratum of these patients is much harder than in the others

comparable to discharge from the army in time of war Therefore before the attempt is made to remove any hysterical manifestation, we had better find out by careful and sympathetic history taking what it is that we are up against

If we have by our preliminary talks obtained the patient's confidence, usually it is easy to abolish the local manifestation Thus a patient with paralysis which came on after a slight accident and was thought to be associated with some spinal lesion was told in due course that the paralysis was kept up for several rather unworthy reasons all of which she saw She was getting compensation In itself the compensation was poor, but that is very characteristic of all compensation neuroses The amount of money the patients get is trivial, but there have always been people who will do all sorts of stupid things for thirty pieces of silver Secondly she was working off a grudge against an employer or she thought she was It came as a disagreeable surprise that only herself and an insurance company, which was devoid of feeling were losing anything Thirdly she was being brought under the notice of certain well to do relatives who had hitherto neglected her, but who were now doing quite a lot for her She was also working off a grudge against mankind in general She did grasp all these things which were of course arrived at very slowly, over four or five weeks were taken up with this and she then became well and remained so to my knowledge for at least five years During the talks it was explained that the paralysis persisted because she believed her spine was injured Others had told her that there was no lesion, but not till she saw what she was doing, did she believe that

It may be necessary in paralytic cases after all the essentials have emerged to tell the patient actually that he can now move He may in a curious way accept all that he has been told, and unless he is told specifically that therefore he can now move there may be no movement

If there is no time to carry out a long enquiry, and in out patient practice this may be so then the removal of the manifest symptoms only may be advisable As has been stated this is not so dangerous in the out patient social class

Hysterical patients are so very suggestible that it is often quite easy by strong assurance to remove these paralyses and contractures Simply repeating to the patient " you can do it , after explaining the nature of emotional reactions and the power of belief in keeping up symptoms, will often be followed by the moving of the limb a little and then more The seance at which this is done should not be broken off until very complete movement has been obtained If the doctor stops after getting only a very slight movement, he will get only a tiny bit more the next time and the treatment can be spun out indefinitely

I think it better not to use electricity or other physical agency at these seances The patient will always be sure that it was the electricity that cured him We want him to be sure that it was his own mind

lessness She only became obsessional however after marriage that is after all her primness had disappeared With common sense talks this woman improved very much She agreed that she was trying to compensate in a very primitive way by self punishment for to have to spend hours each day trying to put everything straight and never being satisfied is a very real punishment She agreed that it was no use to try to straighten your life that way that either you must do it in fact or reconcile yourself to the fact of its being irregular But it is uncommon for such talks to help these patients though they should be tried

In truth it is very difficult to cure these patients You can give them support They are seeking it Most patients with this condition never become quite well and yet every now and then a patient loses his symptoms when his environment has undergone a drastic change I have known one man get better very quickly after the death of his father and another after a separation from his wife His symptoms which were severe came on soon after marriage and disappeared when he left his wife At all other periods his life has been free from symptoms

But for many their existence is extremely miserable They may have to spend so many hours washing that they have really no time for anything else They may be so obsessed with thoughts that if they go out they may have left poison somewhere though they know they have handled no poison that the misery of it prevents them from ever leaving the house In all other respects these are ordinary sane people and with all these compulsions they remain aware that the obsessions are untrue

Obsessions and compulsions may form part of a frank psychosis but that is another matter

From time to time deep analysis will be followed by the recovery of these patients I know one man whose cleaning rituals were traced back to anal interests in childhood and who became well when these had been brought to consciousness But before an analysis which may last for years is embarked on and these patients do take a particularly long time it should be explained that the treatment will be long and the result uncertain

Obsessions and compulsions are not altogether abnormal phenomena in the sense that we have seen hysterical paralysis is In children they are universal It is only in excess that they become important That being so mild obsessions and compulsions will be found in most neurotic patients It is when they dominate the patients lives when they leave *no peace* and above all when they constitute the whole symptomatology that they become so grave

These patients are craving for support and if they can get it from some devoted person they will feel better They are apt to become very bad indeed if support has been withdrawn I know for example of one young man who

The Obsessive Compulsive Neurosis

An *obsession* is a recurring thought which dominates the patient's mind which he knows to be false or unimportant but which he cannot prevent tor turing him Thus a woman gets the idea that she is growing hair on her face She knows that it is no more than the normal, but the thought cannot be dismissed and makes her extremely unhappy Such a thought will lead to the other symptoms of the neurosis, the *compulsion* Such a person may be compelled by an inner feeling to spend hours every day minutely examining her face to see whether there are new or excessive hairs on it A boy of nineteen spent five or six hours every day examining his books, linen, etc, to make sure that "chemicals" had not got among them He knew that nothing of the kind could have happened, but that did not matter Sometimes the compulsion takes the form of a ritual A man had to read every line of a book sixteen times before he could proceed to the next line, he had to go up and down the steps of his house four times before he could go in Four or multiples of four were his trouble, his birthday was the fourth of the month It is often easy to find some simple association of that kind Compulsive washing is one of the commonest of all the compulsions The patients will spend hours washing till their skin is sore They began by thinking they were unclean, often because of some sexual thoughts or deeds, and the washing was symbolic Finding that out, however, seems to make very little difference There is very little repression in these patients, and one can get endless explanations why they should go on as they do

A woman of thirty five had to spend hours making everything straight in her room Her pictures must be straight her handkerchiefs in the drawers must be straight, and she spent about an hour after she had hung her dresses up in the wardrobe gazing at them to see if they were straight The word straightness was used so often that she was asked to think about it and say what came into her mind It soon came out that her life was not straight. She had a devoted husband for whom she felt no sexual desire, though she liked him very much He believed that she had no desire at all but in fact she did have it towards other men and yielded to it In part then she wanted everything in life to be straight to make up for this, which helps to show how much we live under the domination of words But many are unfaithful to their spouses without having to go through rituals of this sort Her childhood revealed a rather prim little girl, who was always quite tidy, with a very untidy elder sister, for whom she was always putting things straight For this she used to get a great deal of praise An objectionably rich aunt used to comment sometimes on her personal appearance in a way not quite so fulsome, and she loathed that it seemed unjust, for it depended more on poverty than on care

CHAPTER XI

SURGICAL TREATMENT OF MENTAL DISORDERS

By WALTER FREEMAN AND JAMES W. WATTS

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GENERAL CONSIDERATIONS

In the course of the vast strides made in the surgery of the nervous system *during the past half century it is not surprising that mental diseases as such should* finally have been attacked. Surgical operations for the removal of tumors and for the relief of pain have become standard procedures, but surgery for so-called functional disorders of the nervous system had to wait until the physiologists had advanced our knowledge of the functions of the association centers and the great *"silent areas" of the brain to the point where reasonably predictable results* could be obtained. The experimental work was finally epitomized by Jacobsen[1] in chimpanzees whose frontal lobes had been extirpated. Until this time practically all the studies had concerned themselves with the factor of intelligence *since it was generally believed from antiquity onward that the frontal lobes gov*erned intelligence. Jacobsen pointed out, however, that frontal lobectomy had an even more decided effect upon the emotional life of his subjects, since they no longer responded in the usual manner to frustrations of various sorts. Looking backward now to the earlier experiments it is easy to discern similar alterations *in the animals reported upon by Bianchi and his successors.*

In the meantime man himself had been the subject of experiments of nature and of his own devising, and a considerable body of knowledge had grown up concerning the effects of tumors and injuries of the frontal lobes. Probably the best known of these was the American crow bar case first reported nearly a century

was sent round the world to be shaken out of the illness He went to Australia and back and just managed to do it by being well under the influence of alcohol throughout the voyage

This is the neurosis which of all the neuroses causes the greatest suffering The lives of these people are extremely miserable and are often made unnecessarily so by the well meant efforts of the family to get the patient to stop this nonsense It will often be found that the patient s life will be ameliorated and the compulsions become less, if for example he is allowed to stay in the bath room and bathe for an hour or two He is not lying idly in the water but is cleaning himself the whole time At the same time it is granted that these must be very trying patients to live with

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June 1, 1936

prefrontal leucotomy was something more profound than mere interruption of habitual activities Indeed the motor activities as well as the hallucinations and delusions persisted for an indefinite period following operation There was however a decided change in the attitude of the patient toward these manifestations the outstanding feature of which was the decrease in the emotional tone connected with the abnormal ideas The hallucinations might continue but the patient no longer was afraid of the voices the hand washing might persist but the concern over contamination was abolished Then it became apparent that the whole attitude of the patient toward himself was altered from the intensely egocentric to the casual and objective The patient lost interest in himself as he reacquired interest in external events he lost the ability to introspect he became unself conscious sometimes to an undesirable degree he reverted to a state of emotional immaturity like that seen in the child

Further study of cases subjected to the more radical procedure of prefrontal lobotomy gave us additional information concerning the part that is played by the frontal lobes in human behavior Fundamentally we believe the frontal lobes are concerned with foresight and insight particularly as related to the self Intellectual capacity requisite for the solution of problems concerned with earning a living operating machinery solving legal problems performing household duties and the like are preserved quite satisfactorily along with abilities in athletic and other games These abilities require something less than such abilities as those concerned with personal dignity leadership inspiration and exaltation all of which have a subjective component and a strong emotional tinge

The emotional alteration is the outstanding feature in patients who have undergone prefrontal lobotomy The cause for this we believe is the interruption of the fibers connecting the frontal lobes with the thalamus Following operation the cells of the medial dorsal nucleus of the thalamus undergo retrograde degeneration while the architecture of the cortex remains substantially unchanged It would seem therefore that prefrontal lobotomy has a rather specific effect upon the emotional component of ideational activities concerned with foresight and insight which apparently are the expression of activity of the extreme frontal cortex Presumably these activities can continue and anatomical studies have indicated that there are still indirect pathways by means of which activities concerned with the frontal lobes may be transmitted to other parts of the brain However the direct connection with the thalamus is destroyed permanently and consequently these ideas relating to the self are more or less completely deprived of their emotional component Indeed by varying the plane of the surgical incisions or their depth the surgeon is able to control to a certain extent the degree with which the emotion connected with the psychotic ideas is suppressed We speak of bleaching the affect attached to the ego

ago by Harlow[3] with the katamnesis twenty years later The skull and crow bar are treasured relics in the Warren Museum at the Medical School of Harvard University This case, in which a prematurely exploding charge of black powder drove a crowbar through the left frontal lobe of a young foreman and damaged also the right frontal lobe, did a lot to counteract the theories handed down by the phrenologists that the frontal lobes were the seat of intelligence Yet, al though the emotional alterations in this patient were presented in considerable detail psychologists still hunted for the intelligence factor in connection with the frontal lobes and while recognizing the serious perversions of personality result ing from damage to the frontal lobes, still did not seem to realize the exact nature of the fundamental alteration that had taken place in the injured individual The large monographs published by German authors[4] as the result of experiences with brain injuries in World War I still concerned themselves largely with the intel lectual and personality alterations No hint was given that controlled damage to the frontal lobes might be of assistance to the individual in making a better adapta tion to life

Operations upon the frontal lobes for tumors, scars and abscesses became more radical in recent years and it was found surgically possible to remove the whol frontal lobe without serious damage to the individual Rylander[5] made a com prehensive study of the intellectual defects produced by unilateral frontal lobec tomies and Brickner[6] published an illuminating monograph based upon detailed study of an individual who had undergone bifrontal lobectomy for tumor Several other studies along the same lines[7] seemed finally to dispose of the myth that the frontal lobes govern intelligence as customarily measured There remained then the question of other factors in the human personality that underwent alterations as the result of the various kinds of injuries, pathological and surgical affecting the frontal lobes

It was at this point in the development of neurosurgery that Egas Moniz pointed out the possible value to the psychotic individual of inactivation of a greater or lesser part of the frontal lobes Egas Moniz[8] reasoned that the peculiar stereotyped behavior of the psychotic individual arose in connection with a too firmly established series of connections of various cortical cellular groups with one another The normal individual, he suggested, is endowed with enormous po tentialities for change in behavior as the result of fluidity of pattern of the various groups of cells, but during psychosis this fluidity gives way to fixity that underlies and determines the psychotic behavior " To cure these patients we must destroy the more or less fixed arrangements of cellular connections that exist in the brain and particularly those which are related to the frontal lobes "

We had not been working with the *Egas Moniz method* long before it became evident that the alteration in the behavior of the psychotic individual following

years Better results usually are obtainable in older individuals because they have been able to maintain themselves in a social environment until the disease process brought about disability Young individuals with a strong constitutional trend toward seclusiveness and fantasy are less apt to respond satisfactorily On the other hand youthful individuals may make a very satisfactory adjustment when they are as it were given another chance to develop without the overwhelming burden of autistic thinking

Duration of disease also is unimportant provided the emotional component remains severe We have obtained much better results in some patients with obsessive compulsive neuroses whose duration is measured in decades than in some schizophrenic individuals whose break with reality is measured in months

Original intellectual endowment of a high order is favorable We believe that many cases of mental deficiency with psychosis are in reality schizophrenias occurring in childhood These patients are poor risks but if the family situation seems to require the presence of a household pet we sometimes consent to operate upon patients whose intellectual progress seems to have been cut short Even more important however is a reasonable modicum of energy in the personality A dreamy inefficient lazy individual responds to prefrontal lobotomy with more or less permanent indolence On the other hand a previously energetic individual even with relatively meager intelligence can make a very satisfactory place for himself The feeling of personal dignity that is sacrificed by operation makes it possible for him to succeed in simple routine or even menial employment While even the highly intelligent patient may never again be able to paint a picture write a book or compose a piece of music nevertheless given sufficient energy he may be happy doing routine clerical or stenographic work As a matter of fact some patients have made outstanding successes in rather technical fields their intelligence unharmed their abilities directed toward their tasks rather than ceaselessly seeking a solution to their personal problems

Structuralization of a psychosis or neuro is usually renders necessary an extensive operation If the patient suffers merely from chronic anxiety and nervous tension good results may be obtained by minimal incisions If on the other hand, the patient has built up over a long period an array of systematized delusions obsessions and compulsions stabilized hallucinations more extensive incisions will be required It is in this group particularly that secondary operations are apt to be required with correspondingly great reduction in the capacity of the individual for constructive adaptation in his social milieu

Hypochondriacal complaints are overcome easily by prefrontal lobotomy Indeed the operation may find one of its most important applications in patients with psychosomatic disorders who have suffered for years if not decades with colitis neurocirculatory asthenia digestive disorders hyperventilation syndromes

In order to obtain satisfactory results in a given case, just enough of the affective component must be eliminated to abolish the patient's preoccupations with his ideas. Otherwise a relapse will occur sooner or later. On the other hand every millimeter of tissue that is sacrificed posterior to the ideal plane of section will not only prolong convalescence but also reduce the final social effectiveness of the individual in his return to a normal existence. In deciding where to make the incisions the surgeon should consider the various factors in the total situation such as age, duration, structuralization, energy component, stability of personality, emotional deterioration and the like. Furthermore, before even undertaking the operation he should ask himself whether the patient would be more of a burden to his family after operation because of his lack of inhibitions than he would be if allowed to continue on his course without operation. Patients are always satisfied when a successful operation relieves them of their feelings of fear, anxiety, guilt, remorse and nervous tension, but in some cases they make life miserable for their relatives because of indolence, procrastination, abusiveness, tactlessness and sarcasm.

Indications and Contraindications

It stands to reason that such drastic treatment as surgery should be reserved for patients, who have failed to respond to milder measures and for those in whom it may be predicted in advance that milder methods will fail. Furthermore, the emotional tension must be so severe that the individual is faced with disability or suicide. If the emotional component in the psychosis has subsided to the point where deterioration is much in evidence, the likelihood of a successful result is remote. A deteriorated schizophrenic looks and acts about the same with or without his frontal lobes. A special word of caution is needed about those individuals who have met their problem of emotional tension with flight into alcohol. The motor pattern of behavior in connection with chronic alcoholism, the bending of the elbow, persists long after the need for relief in alcohol is abolished. Indeed we have observed chronic alcoholism develop following prefrontal lobotomy in previously non-alcoholic subjects.

The question of emotional tension in psychotic individuals depends not alone upon the subjective complaints but also upon objective observations in regard to the state of sympathetic tonus as measured by the cardiac rate, peripheral vasomotor tone, size of pupil, dryness of mouth. Inaccessible patients may manifest their emotional tension by disturbed behavior, mutism, untidiness, refusal of food, aggressive and destructive actions and catatonia. As a general rule the more severe the disturbances of behavior are, the more profound will be the alteration of the patient as the result of operation.

Age is an unimportant factor. The range of our cases extends from 4 to 80

Organic disease of the brain is not necessarily a contraindication Excitements and depressions not infrequently are associated with rather than caused by arteriosclerosis thrombosis epilepsy and senile changes We have operated upon one patient with multiple sclerosis because of constant distress and with good results Two patients with parkinsonism showed no neurological changes following operation One died soon after and the other patient relapsed into her suicidal tendencies and had to be committed to the hospital after a year As a rule however patients with organic disease of the brain are not strikingly benefited by prefrontal lobotomy

Prefrontal Lobotomy

Successful prefrontal lobotomy demands precise surgery It is best carried out under local anesthesia since the behavior of the patient on the operating table best determines the depth of incisions In uncooperative patients a general anesthetic must be used and the decision made as to how much of the frontal lobe must be sacrificed in order to obtain the best results Technical details of the operation need not be given It suffices to say merely that burr holes are placed in the coronal suture 6 cm above the zygoma and that through these the subcortical white matter is severed in the plane of the coronal suture by means of a blunt knife In most instances these incisions are deepened by radial stabs that cut the fibers but push aside the arteries and veins on the mesial surface of the hemispheres The knife is not allowed to trespass upon the middle fossa because of possible bleeding from short perforating arteries and because of the pronounced depression of alertness that has led to massive pulmonary atelectasis from suppression of the cough reflex Anatomically this incision usually opens the anterior horn of the lateral ventricles opposite the genu of the corpus callosum There is minimal trauma to the cortex although the anterior extension of the insula may be touched and also the caudate nucleus The anterior thalamic radiation is severed almost completely but the white matter at the upper and lower extremities of the frontal lobe usually remains intact

During the course of operation under local anesthesia the patient usually is able to continue his conversation Sometimes he is too anxious and apprehensive to give a good account of himself at other times too retarded His condition remains unchanged even after three of the four quadrants of the frontal lobes are incised (Fig 1) Only with the final stab incisions do definite changes appear Then the patient suddenly loses his emotional tension replies with a flattened voice and in monosyllables and becomes disoriented and quite indifferent to the further steps of the operation Only when this series of events occurs can we be relatively certain that the operation will be a success

painful backs and limbs The integration of the personality is often remarkably good following prefrontal lobotomy in these cases At the present time we are extending our researches into the field of painful conditions associated with definite structural alterations such as radiculitis, tabes dorsalis, phantom limb syndrome recurrent carcinoma and thalamic pain Prefrontal lobotomy reduces or abolishes the affective component of the pain in such cases, and it would appear to us that it is the affective component rather than the pain itself which is disabling An incidental observation is the tendency toward the reduction of arterial hypertension and the "pacification" of the heart in rheumatic and subacute bacterial endocarditis There can be little doubt that the abolition of anxiety by prefrontal lobotomy helps the various viscera to resume their normal rhythmicity Certainly the gain in weight that mental patients undergo after operation would seem to indicate a eupeptic condition Two of our patients operated upon for agitated depression have succumbed later from carcinomas of the colon and pancreas Relatives reported that they bore their diseases with remarkable fortitude We personally observed a young woman undergo childbirth The pains were normal and normally perceived but the patient was not distressed, and she left the hospital in excellent condition on the sixth day of her puerperium

Prefrontal lobotomy is undertaken for the relief of symptoms, therefore the cases in our experience are not restricted to any definite categories Schizophrenias involutional depressions obsessive compulsive and ruminative tension states and chronic anxiety states with or without hypochondriacal complaints make up the great majority of our cases A few cases of manic depressive psychosis have responded satisfactorily On the other hand, the few chronic alcoholics have responded badly We have been wary of criminals, drug addicts homosexuals and psychopaths generally, but some outstanding results have been reported by Porteus and Kepner[9] Occasionally we have regretted operating on patients because of difficult and aggressive behavior later on which has made things very difficult for their families On later inquiry it was always found that the patient had an aggressive personality before the development of his illness and that this was underestimated We are inclined to refuse operation in such cases no matter how clamorous the individual If the aggressive behavior is part of the psychosis however and conditioned by fear, then the operation not only does away with the fear but also with the aggressive behavior We vividly recall a veritable behemoth of a colored woman who was a perpetual menace to her fellow patients and who required five attendants to administer drugs over her objections For years she remained in seclusion on one of the most disturbed wards Following operation she became one of the best patients on the ward and she resumed her skillful crocheting but not with the same speed as before operation Only her husband s timidity kept her in the hospital

a stage of almost complete dependence followed by one of resentfulness of domination childish delight in all the little occurrences in the vicinity and refusal to take a situation seriously The member of the family charged with reconstructing the patient has an almost full time job on her hands The task is lightened however by the rapidity with which the operated patient grows up emotionally to more adult levels of response and also by the lack of any sustained animus The patient may exhibit petulance but does not hold grudges he is impervious to insults and he can be punished with good immediate and eventual results Such experiences do not injure his self esteem Patients usually can carry out light household tasks under supervision as soon as they reach home but they are not able to assume much responsibility for anywhere from six weeks to six months after operation If their jobs are rather simple and routine they may do well after the second or third month but anything complex is likely to require a year However we have noted improvement in adaptation to occur over a long period three to five years provided relapse does not occur nor the normal aging process in involutional cases

Difficult patients like those who have been schizophrenic for ten years or more who require extensive surgical incisions for the relief of their distress respond much more slowly and never as completely as the less seriously affected ones While their psychotic ideas and antisocial behavior may be ameliorated to the point where they can live at home and keep the peace with their relatives nevertheless they are lacking in ambition and capacity to secure employment or to retain it if they do They continue to live at home are pleasant enough in their manners especially to strangers but they make little contribution to family life They are drones but at least cheerful drones are more tolerable than complaining ones

Case Reports

1 *Schizophrenia* — J H H white male aged 3 at time of operation graduated with honors from high school but failed in law school and was not permitted to continue in 1935 because of disturbing tendencies recognized as abnormal He married in 1935 and had one child but adjusted poorly to marriage After a short period in Sheppard and Enoch Pratt Hospital in 1937 he was admitted to Huntington (W Va) State Hospital where he was combative voluble hyperactive but coherent He received insulin shock treatment with little change According to the report of Dr Edward F Reaser who referred him H was quite impulsive On a number of occasions he has thrust a foot or a hand through a glass door or window cutting the tissues badly He strikes his attendant and others suddenly and without warning Not long ago he discovered an old knife



Fig 1 Coronal section of brain through genu of corpus callosum showing location of burr hole and the radial stab incisions into upper and lower quadrants of frontal lobe (Courtesy of South Med Jour)

Following operation there may be a little rise in temperature and pulse rate but these soon return to normal Vomiting may last for a day and incontinence somewhat longer By the second day the patient usually is able to enjoy food There is during the early postoperative period moderate inertia with masking of the face plateau speech and persistence of the disorientation The inertia then may give way to restlessness with repetitive movements, tapping rubbing fingering and so on Patients often deny that they have been operated upon even though they may remember the drilling and the cutting and are shown their bandages and tapped lightly over their incisions Within a week in most instances patients are able to walk about the hospital and feed themselves and soon can be discharged When because of a prolonged psychosis with marked structuralization prefrontal lobotomy is carried out posterior to the plane of the coronal suture the primary inertia is much more prolonged Then problems of feeding and incontinence are increased in magnitude while a return to more normal social integration is delayed almost indefinitely

Difficulties most frequently met with during convalescence from prefrontal lobotomy are chiefly along the line of inertia on the one hand and tactlessness on the other We have described these[10] in some detail Substantially prefrontal lobotomy reduces the individual to a stage of emotional immaturity First is

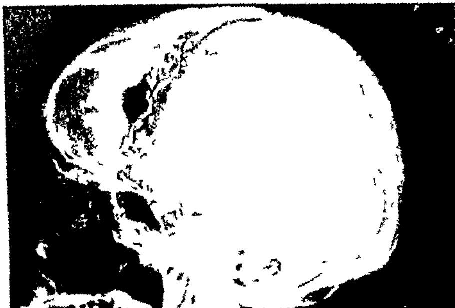


FIG 2 Lateral roentgenogram of skull in Case 1 The location of the incisions is indicated by the injection of iodized oil Some oil has escaped into the median longitudinal fissure The incision follows accurately the plane of the coronal suture and does not trespass upon the middle fossa

barely prevented from becoming serious By November 1942 however the patient was allowed to visit the city accompanied by an attendant He gave up his assaultiveness no longer responded to hallucinations and while still rather boisterous at times no longer required restraint He showed little emotion on the occasion of the death of his mother He wrote many letters rather brief and factual to former friends He was discharged to his brother s care June 4 1943 and soon after this secured employment as a welder He moved from job to job and from lodging house to lodging house because of his instability and rather frequent spells of intoxication with subsequent enuresis He returned for an interview March 26 1944 looking rather unkempt but cheerful and talkative as usual

It s that dog in here [pointing to his chest] and he is constantly talking to me It requires every effort of my will to prevent my doing the things he says but sometimes he gets the best of me and I grunt or howl or yelp but I have not done anything else I have been thrown out of a number of shows movies and burlesques because that s when dog seems to get the best of me and he keeps me

and attempted to thrust it into his chest It was an impulsive act and I do not believe him to be suicidal, but that this was the result of his hallucinations

Patient was admitted to George Washington University Hospital July 10 1941 Observation showed him to be violent and dangerous He spat in various directions not always toward the examiner, and struggled against his bonds He told how he could read minds by voiding and converging on fortune tellers, and he told about raising flesh after sweating in a fortune teller s place The day after prefrontal lobotomy he was smiling and humming still rather talkative and still hallucinated His face was masked, he vomited occasionally and was incontinent but there was no resistiveness, struggling or spitting His wristlets were removed and he was given a glass of water which he acknowledged with a smile, drank and handed back the glass

Q Do the voices accuse you of things?

A Let us assume this if they say drop a dish break a glass drop a tray, if I do any of these three things I am obeying commands

Q Suppose these voices tell you to hit me?

A I have to think that over

Q *Didn't the voices say for you to break that glass?*

A Yes, but I didn t pay any attention to it I just drank the water

Patient denied that he had been operated upon even though he was shown the bandages in a mirror and tapped lightly over the incisions When released from his bonds he stretched his muscles with vigor and lay back with a smile of relief picked up a newspaper and began to read the comics

Postoperative recovery was rapid By the third postoperative day H could talk quite coherently

Q Are there two worlds now, that of the dream and that of reality?

A It seems so

Q Which are you in?

A Probably more in the real In the spirit world there are many forms without weight but we see and feel the substance of the weight If I could walk around the Washington Monument, I would be more content

He continued rather overactive and noisy but was never assaultive He sang and talked in a loud voice made amorous advances to the nurse but ate and slept well, did not spit or throw food around and he regained control of his bladder Roentgenograms showed that the incisions had been made accurately and rather completely in the plane of the coronal suture (Fig 2)

H was returned to Huntington State Hospital on July 21, where restraint was still required because of his unprovoked assaults Four months later at the suggestion of Dr Samuel Hamilton who was visiting he was unshackled and according to Dr Rey er immediately made an attack on Dr Hamilton that was

of a recrudescence of the endocarditis with multiple small emboli, none of them serious The infection showed satisfactory control by sulfathiazole

J H s principal obsession was that he was slowly turning into a horrible terrible disgusting loathsome filthy man that he was becoming a hog in human form He elaborated for hours on end Numbers were also an obsession There were good numbers and bad numbers 8 was particularly bad but fortunately he had come to Washington on No 4 train 5 and 6 were getting ready to build up There was much elaboration here also Preoccupation and emotional distress were sufficient to make him break down in weeping spells in spite of rather heavy sedation Physically the patient was thin and sallow with edema of the right leg The heart was enlarged and revealed a loud systolic murmur at the apex and a diastolic murmur at the left of the sternum The pulse was 116 No recent emboli were observed

Prefrontal lobotomy was carried out June 19 1941 He was only slightly disoriented and answered coherently and at some length In a few days he was able to write rather long and expressive letters was cheerful speaking of his obsessions in the past tense The anxiety disappeared and he slept and ate well Convalescence was marred by a renewed crop of painful emboli to the extremities but he was discharged in three weeks to his home Soon he began to manifest disagreeable behavior raging at trifles refusing to wash or dress expressing hatred of his parents while at the same time showing little realization of his abnormalities of conduct He went to Florida for the winter but adjusted badly there In October 1941 he wrote I am still besieged with the same bothersome repulsive and neurotic ideas with which I was besieged before I did feel relieved

My biggest psychic problem now seems to be the fear that I am afraid to try to cast off these neurotic ideas or fears by attempting to drop the neurotic habits which I am often forced to do So I shall probably remain in a quandary

Recurrence of the obsessions progressed to a point of almost complete preoccupation Since this was accompanied by physical relapse and a vile disposition J H was brought back to Washington for a second operation March 18 194 On this occasion the previous incisions were reopened and deepened There was no significant change in his behavior following this operation and he remained in the hospital until by means of transfusions his physical condition could be improved A third operation was attempted March 30 1942 somewhat posterior *to the coronal suture Because of disarrangement of the drapes this procedure* was not completed for fear of contamination and sulfanilimid powder was placed in the incisions The patient had a convulsive seizure shortly afterwards By April 9th when he was in satisfactory condition the frontal lobes were incised 1 cm posterior to the plane of the coronal suture

awake at night so that I have to have a stiff drink before I can get to sleep That dog is the meanest, lowest sort of thing He calls me the filthiest names and accuses me of all sorts of perversions I recognize him, of course, as the baser part of my nature I guess that is the id that you talk about Anyway I've got to fight him continuously to keep him from overwhelming me I very seldom dream and then it is about innocuous things, and it does not scare me I have had trouble with dog wetting the bed I had to buy a new mattress, but now I carry a rubber sheet with me I don't get tired on the job and I really work I would eat better, if I did not have to drink so much to keep dog under control Dog has been with me for so long that I can't seem to throw him off any more He makes me masturbate but I don't do this so often now "

By November 1944 H had changed jobs a number of times but was driving a delivery truck, had been off alcohol and drugs for two months and had had but few spells of incontinence In his letters he no longer mentioned "dog" and while he was still somewhat overactive and irresponsible, he was able to retain employment for longer periods He is taking the initiative in securing a restoration of his civil rights In September 1945 he continued to improve

This patient has shown the rather typical stages of recovery from a severe hallucinatory psychosis First the fear of the voices and control by them subsided, and later the experiences themselves disappeared At the same time the immature behavior and irresponsibility complicated by alcoholism were gradually controlled whereas the inherent energy of the individual helped him to overcome the postoperative inertia Improvement in personal judgment is still continuing four years after operation While H is still handicapped in competition with normal individuals, he is no longer a liability and a danger to society

Summary — Schizophrenia beginning in 1935 with hospitalization from 1937 to 1941 actively hallucinated and delusional brought to Washington shackled hand and foot because of violent tendencies prefrontal lobotomy in July 1941 with continuation of impulsive behavior for more than six months discharged to his family in 1943, shifting occupational adjustment complicated by alcoholism enuresis and convulsions for the most part self sustaining for two years with continuing gradual improvement

7 *Obsessive Neurosis* — J H, white male, aged 24 was referred by Dr Watkin of Sioux City after many attempts at treatment of his obsessive compulsive state had failed The first symptoms were manifest at the age of 11 Numbers and contamination seemed to be the center of his ideas with constant elaboration until they dominated his whole behavior Two years of psychoanalysis was ineffective and was complicated by the development in 1940 of subacute bacterial endocarditis 12 electroshock treatments were ineffective, and subsequent insulin shock therapy had to be terminated without improvement after 14 comas, because

ment at the adult level The emotional core of the neurosis however is abolished the sting is drawn

3 *Involutional Depression* — Mrs H R a widow with four children aged 48 had always been an overly careful pessimistic woman a hard worker proud and devout Beginning in 1933 two years after the death of her husband she began *complaining of burning in the mouth and abdominal pains Appendectomy* and uterine suspension brought no improvement and she returned repeatedly to the hospital because of abdominal complaints In between times she sought relief in alcohol and barbiturates With the passage of three years she became *more and more depressed* anxious and agitated and was admitted to the psychopathic division of Gallinger Hospital on four occasions for short periods There she was spoken of as the meanest woman in ten counties

Prefrontal leucotomy by the Moniz technic was carried out November 21 1936 The following day she was correctly oriented cheerful and free from abdominal distress *Within a week the pains and other distress recurred so that* by January she again required hospitalization Doctor she said I tell you it s the depression The depression came back on me For a while I was free of it but now it s just as bad as it ever was Whenever the depression comes on me these aches and pains start up again and I m perfectly miserable

Since conservative treatment had no effect prefrontal lobotomy was carried out in the plane of the coronal suture on March 10 1937 This time there was considerable inertia disorientation vomiting and incontinence but the visceral complaints disappeared permanently

Mrs R s convalescence was fairly rapid but she became a problem in the household because of her antagonism to her daughters and her unrestrained criticism of everything that went on in the house She frequently raged over trifles so that it was necessary to commit her to St Elizabeths Hospital November 19 1937 Here she expressed ideas of guilt and recited her sins as in a litany but aside from a delusion that she had syphilis did not stress any somatic complaints Improvement became definite in six months and by August 1938 she was allowed to go home on extended visit At this time she said I m not really worried over anything but I think the children would be better if I were around I want to get out now and do my work like I always did and get the satisfaction out of it You can see how much I ve picked up in weight and I think my expression is better too

At home Mrs R s adaptation improved with the passage of time Her sons were inducted into the army and her daughters went to work leaving the patient in charge of the house and her grandchild Her health has remained good and she continues to be cheerful and energetic a little caustic at times rather easily fatigued She sleeps and eats well and has gained 40 pounds She has resumed

Following this operation and for the first time, the patient was inert and unresponsive to a marked degree disoriented, vomiting and incontinent His recovery was much slower, but in a few days he was eating bacon with relish previously his pet aversion He was able to return to Florida on April 27 Following this the patient no longer broke into rages over trifles Rather he surveyed the world with amused tolerance and saw a joke in everything He seldom initiated any activity but was fairly obedient about washing and dressing although lackadaisical Convulsions recurred from time to time but the cardiac condition seemed to subside J H wrote postcards now, whereas before they had been long letters He continued to mention his obsessions but without insistence At home he secured a job as " starter " on a golf course but this did not last

He made one or two more ineffectual attempts at employment and study At home he was easy going much of the time, slow, lazy and undiplomatic His parents had to be guarded in their conversation, because he would delight in repeating everything he heard

In December, 1944 Dr Watkin reported that J H was able to do a little work about the yard that he could walk several blocks without cardiac embarrassment Electrocardiogram and blood pressure were normal there had been no activity of the endocarditis and no convulsions in six months The patient himself was able to write a long coherent letter exhibiting rather puerile lack of restraint and dignity and emphasizing his handicaps He flared up occasionally but these outbursts did not last long On the other hand he was unable to make or retain friends because of his sarcasm and lack of tact

Summary — Disabling obsessive neurosis beginning at the age of 11 and resisting psychoanalysis and shock therapy subacute bacterial endocarditis with repeated embolism temporary improvement after first lobotomy followed by disagreeable behavior no change after second lobotomy but marked inertia following third operation, slow recovery of health with puerility and irritability, indifferent attempts to work and study with cheerful lack of tact, the bacterial endocarditis seems to be under control

This case is a good example of our experience showing how necessary it is to operate repeatedly until the critical plane of section is encountered It is essential to interrupt a sufficient number of fibers and yet every millimeter that the knife trespasses upon the tissues behind the plane of the coronal suture reduces the ability of the patient to make an effective social adjustment This case also demonstrates how a suppression of the emotional charge of the self directed ideas is accompanied by a release of inhibitions and of hostility toward others As the acute aggressiveness subsides the residuals consist in sarcasm, cynicism and tactlessness, all of which are still handicapping the patient in his attempts at adjust

recuperative powers are lowered the result may be anxiety and loss of sleep which still further lowers the recuperative powers In this manner is set up a vicious circle in which the individual then comes to estimate everything that happens to him in terms of the effect of the original stimulus The problem becomes obsessive It is normal for a person occasionally to entertain peculiar ideas about himself and his surroundings These ideas come and go as the various hypotheses are tested and the less reasonable ones are excluded However it is not the ideas that are dangerous but rather their fixation Ideas are fixed by emotion and when they become sufficiently fixed to disturb the individual s relationship with reality he falls sick It is normal for an individual to have some concern about himself and about the future for without these he would be completely indifferent to his responsibilities but too much worry and concern defeat the efforts of the individual to adapt himself to the world of reality He becomes egocentric and withdraws from his fellows to contemplate the horrors and disasters just around the corner Anterograde algimnesia the painful contemplation of events that will never happen takes possession of him and paralyzes him for useful activity

Cutting off the affective component by severing the connection between the thalamus and the frontal lobes enables the individual to forget about himself to contemplate the future with simple objectivity and to apply himself to earning a living instead of saving himself from an unknown but horrendous fate

Results

With diversified material it is understandable that results will be variable Furthermore results must be measured in terms of social effectiveness as well as individual relief On the basis of some 300 cases during the past 8 years we may state that 90 per cent of our patients have ecured relief from their distress The operative mortality is below 3 per cent A number of the older individuals have died since operation Of those surviving a year or more and considered stabilized some 30 per cent are gainfully employed and another 30 per cent are keeping house while 20 per cent are at home and 20 per cent still in hospitals

These figures probably can be considerably improved by better selection of cases and earlier operation For instance among schizophrenics operated upon in the first two years of illness 15 out of 16 are considered good results while among those who were sick for ten years or more only one out of 18 reacted well and 10 were unimproved Where deterioration has not occurred as in obsessive states and psychoneuroses good results are attained in 80 per cent or more

Convulsive seizures occur in some 10 per cent of patients subjected to prefrontal lobotomy but in only 3 per cent do they prove resistive to treatment

her outside interests, particularly in church, and her old ideas no longer bother her She never complains of any visceral distress, even though in 1943 she was under treatment for metrorrhagia and cystitis There was a mild recurrence of anxiety in the Spring of 1945 when her son was in Germany, but in September she was looking forward with pleasure to his return

Summary —Middle aged woman with many complaints of abdominal distress eight admissions to George Washington University Hospital and four to Gallinger Municipal Hospital in three years, prefrontal leucotomy (Moniz) November 21, 1936, with relief of her distress for a week during which she was lively, rather elated and correctly oriented, by December 12 the symptoms had come back in full force, a second and more extensive prefrontal lobotomy in the plane of the coronal suture was performed on March 10, 1937, with prolonged inertia and incontinence, recovery was slow and punctuated by periods of unrestrained behavior that required hospitalization for a year, but since August, 1938, she has been living at home and assuming more responsibility as her sons have gone to war and her daughters to work

This case demonstrates the immediate and lasting relief from preoccupation with somatic complaints once the critical plane of section is attained The first operation was placed too far forward in the frontal lobes, but the second one was satisfactory Following the second operation however, the patient was slow in making an adequate social adjustment because of her lack of restraint in social situations The persistence of ideas long after operation was notable, even though the emotion was no longer overpowering The patient has become more stable rather than less during the past six years

Mechanisms

From what has been described above, it would seem that prefrontal lobotomy does away with the emotional substrate of the psychosis or neurosis There is in every functional mental disorder a large substrate that apparently serves to maintain whatever ideational processes are present We[7] have discussed some of these mechanisms For instance it is a normal and natural process for the individual to examine himself when a new experience occurs, and to seek the answers to it in very personal terms Insight and foresight allow him to construct a series of consequences of varying complexity and probability If none of the dire consequences occurs in the immediate future he is apt to forget about the whole thing If, on the other hand, another or a series of experiences occurs that can be tied in with the first one the effect is reinforced The problem which at first was merely intriguing becomes something pervasive obsessive malign in its potentialities Should the experience occur when the individual's

recuperative powers are lowered the result may be anxiety and loss of sleep which still further lowers the recuperative powers In this manner is set up a vicious circle in which the individual then comes to estimate everything that happens to him in terms of the effect of the original stimulus The problem becomes obsessive It is normal for a person occasionally to entertain peculiar ideas about himself and his surroundings These ideas come and go as the various hypotheses are tested and the less reasonable ones are excluded However it is not the ideas that are dangerous but rather their fixation Ideas are fixed by emotion, and when they become sufficiently fixed to disturb the individual s relationship with reality he falls sick It is normal for an individual to have some concern about himself and about the future for without these he would be completely indifferent to his responsibilities but too much worry and concern defeat the efforts of the individual to adapt himself to the world of reality He becomes egocentric and withdraws from his fellows to contemplate the horrors and disasters just around the corner Anterograde algumnesia the painful contemplation of events that will never happen takes possession of him and paralyzes him for useful activity

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The seizures thus far have not resulted seriously Two of our patients incompletely relieved have committed suicide Two others, owing to arterial injury at the time of operation, suffered persistent hemiplegia

In summary psychosurgery is a very useful procedure in patients presenting *disabling emotional disorders of certain types but is to be applied constructively* with full recognition of the possible adverse effects upon the social situation as well as the patient

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